

N60478.AR.001669

NWS EARLE

5090.3a

SITE INVESTIGATION REPORT SUMMARY OF FINDINGS FOR UNDERGROUND STORAGE
TANK E-13/2 NWS EARLE NJ
8/16/1995
ENVIRO-TECH, INC.

Item # 17
Box 1

Closure Report for:
UST E-13/2

000000384

**SITE INVESTIGATION REPORT
SUMMARY OF FINDINGS FOR UST E-13/2**

**UNITED STATES NAVAL WEAPONS STATION - EARLE
Colts Neck, Monmouth County, New Jersey**

August 16, 1995

Prepared for:

Tom Dunn
ROICC
NWS Earle
Colts Neck, New Jersey

Prepared by:

Enviro-Tech, Inc.
364 Broad Street
Keyport, New Jersey

Item # (17)
Box 1

Closure Report for:
UST E-13/2

EARLE FILES
BOX #
C-18 loose

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Tom Dunn
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Int-Tech Inc.

Prepared by:

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364 Broad Street
Keyport, New Jersey

UST-014
2/91



FOR STATE USE ONLY

UST# _____
Date Rec'd _____
TMS# _____
Staff _____

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation

CN 028
Trenton, NJ 08625-0028
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delane
Directo

UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY

*Under the provisions of the Underground Storage
of Hazardous Substances Act
in accordance with N.J.A.C. 7:14B*

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- Please print legibly or type.
- Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for UST's, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.
- Return one original of the form and all required attachments to the above address.
- Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.
- Explain any "No" or "N/A" response on a separate sheet.

Date of Submission _____

0151003
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

UNITED STATES NAVAL WEAPONS STATION - EARL
COLTS NECK

County MONMOUTH

Telephone No. 908-866-2048

OWNER'S NAME AND ADDRESS, if different from above

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? Yes No If Yes, Case No. _____

(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) *2 HEATING OIL

C. Have any vapor hazards been mitigated? Yes No N/A

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. _____

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated.

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification, and disposal location.

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

- a. North arrow and scale
- b. The locations of the ground water monitoring wells ..
- c. Location and depth of each soil sample and boring
- d. All major surface and sub-surface structures and utilities
- e. Approximate property boundaries
- f. All existing or closed underground storage tank systems, including appurtenant piping
- g. A cross-sectional view indicating depth of tank, stratigraphy and location of water table
- h. Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? Yes No N/A

2. Were soil borings taken at the tank system closure site as prescribed? Yes No N/A

3. Attach the analytical results in tabular form and include the following information about each sample:

- a. Customer sample number (keyed to the site map)
- b. The depth of the soil sample
- c. Soil boring logs
- d. Method detection limit of the method used
- e. QA/QC Information as required

D. Ground Water Monitoring1. Number of ground water monitoring wells installed NONE

2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:

- a. Site diagram number for each well installed
- b. Depth of ground water surface
- c. Depth of screened interval
- d. Method detection limit of the method used
- e. Well logs
- f. Well permit numbers
- g. QA/QC Information as required

V. SOIL CONTAMINATIONA. Was soil contamination found? Yes No

If "Yes", please answer Question B-E

If "No", please answer Question B

B. The highest soil contamination still remaining in the ground has been determined to be:

1. 22 ppb total BTEX, 8,921 ppb total non-targeted VOC
2. N/A ppb total B/N, N/A ppb total non-targeted B/N
3. 5,200 ppm TPHC
4. 6 ppb TETRAChloroETHENE (for non-petroleum substance)

C. Remediation of free product contaminated soils

1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface Yes No2. Free product contaminated soils are suspected to exist below the water table Yes No3. Free product contaminated soils are suspected to exist off the property boundaries. Yes NoD. Was the vertical and horizontal extent of contamination determined? Yes No N/AE. Does soil contamination intersect ground water? Yes No N/A**VI. GROUND WATER CONTAMINATION**A. Was ground water contamination found? Yes No

If "Yes", please answer Questions B-G.

If "No", please answer only Question B.

B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:

1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
2. _____ ppb total B/N, _____ ppb total non-targeted B/N
3. _____ ppb total MTBE, _____ ppb total TBA
4. _____ ppb _____ (for non-petroleum substance)

5. greatest thickness of separate phase product found _____

6. separate phase product has been delineated Yes No N/A

C. Result(s) of well search

1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. Yes No N/A

2. The number of these wells identified is _____.

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is _____ feet from the source and its screening begins at a depth of _____ feet.
2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is _____ feet below grade. This well is located _____ feet from the source.
3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. Yes No N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well.
 Yes No N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. Yes No
2. The plume is suspected to continue off the property at concentrations greater than MCLs.
 Yes No
3. Off property access (circle one): is being sought has been approved has been denied

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) & 9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number..

"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) A. LEE FUNKHAUSER SIGNATURE a. lee f. h. auser

COMPANY NAME ENVIRO - TECH, INC. DATE 8/16/95
(Preparer of Site Assessment Plan)

CERTIFYING
ORGANIZATION STATE OF NEW JERSEY CERTIFICATION
NUMBER 0010953

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

"I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Steven Prizzi SIGNATURE S. Prizzi

COMPANY NAME Ceutral Pump & Tank DATE 9/28/95
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)1]:

"I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)2]:

1. For a corporation, by a principal executive officer, or at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner, or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

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2. SUMMARY OF VO ANALYTICAL RESULTS FOR #2 HEATING OIL UST POST-EXCAVATION SOIL SAMPLES (UST E-13/2)

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- I. RESIDUAL PRODUCT AND BOTTOM SLUDGE DISPOSAL MANIFEST
- II. UST DISPOSAL MANIFEST
- III. CLEAN FILL CERTIFICATION
- IV. LABORATORY ANALYTICAL PACKAGE

ATTACHMENT:

UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

1.0 INTRODUCTION

United States Naval Weapons Station Earle (Earle) is a United States Navy ammunition depot located in Monmouth County, New Jersey. Figure 1 is an annotated United States Geological Survey 7.5 minute series (Marlboro and Long Branch Quadrangles) map showing site location, local topography, drainage, and other features. Figure 2 is a site plan showing site layout, building location, underground storage tank (UST) location, UST designation and other site features.

On September 30, 1994, a single 5,000 gallon #2 heating oil UST, designated E-13 (TMS C93-5996) was removed/closed at the Earle facility. During the installation of a new replacement UST for UST E-13, a single 1,500 gallon #2 heating oil UST was uncovered that had not been included in any of Earle's site plans. This 1,500 gallon #2 heating oil UST was designated E-13/2 by Earle as it was the second UST located at building E-13.

In light of the New Jersey Department of Environmental Protection's (NJDEP's) deadlines regarding UST upgrades, and in light of the NJDEP's regulations regarding USTs that have been in non-operation for over one (1) year, Earle decided to close the single 1,500 gallon #2 heating oil UST (designated E-13/2) at their facility (UST Registration #0151003). The UST measured approximately 9' (long) X 64" (wide).

In November, 1994, Enviro-Tech, Inc. (ETI) of Keyport, New Jersey (NJDEP Closure/Subsurface Evaluation Certification #1300239) was retained by Central Pump & Tank (CP&T) of Freehold, New Jersey (a subcontractor of Tri-State Construction, Inc. [Tri-State] of Fort Washington, Pennsylvania]), the UST removal contractors retained by Earle, to complete the NJDEP's site investigation requirements for the closure of UST E-13/2. ETI's activities at Earle included the completion of a Site Investigation in accordance with N.J.A.C. 7:26E-3.0, and the preparation and submission of a Site Investigation Report (SIR) to the NJDEP which would satisfy the requirements of the NJDEP's Technical Requirements for Site Remediation.

2.0 SITE INVESTIGATIONS

2.1 UST Decommissioning Activities

UST decommissioning and removal activities were conducted on June 8, 1995 by CP&T. UST decommissioning activities included pumping the UST free of residual product, excavating overlying soils to expose the top of the UST, cutting off the top of the UST to allow access to the UST's interior, and cleaning the interior of the UST with a biodegradable degreaser. A total of approximately 1,000 gallons of residual product and bottom sludge was removed from the single 1,500 gallon UST present at the facility by Lorco Petroleum of Old Bridge, New Jersey as New Jersey hazardous waste X722 "Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel

oil tanks". The manifest for the residual product and bottom sludge disposal is included in Appendix I.

During inspection of the UST, no corrosion holes or pitting were observed within the UST by ETI or CP&T personnel. Following the removal of the UST from the ground, the UST was transported to Neptune Iron & Metal Recycling Company, Inc. in Neptune, New Jersey for disposal. The manifest for the disposal of the UST is included in Appendix II.

2.2 Soil Investigation

On June 8, 1995, ETI personnel (Kenneth W. Braitling - NJDEP UST Certification No.G0001345) was on-site to locate and collect post-excavation soil samples from below the UST in accordance with current NJDEP requirements.

During the removal/closure of the UST at the Earle facility, soils removed from above and from the sides of the UST were scanned for "free product contamination" in the field using a Heath Consultants, Inc. Detecto-Pack III flame ionization detector (FID) and/or one or more of the following methods:

Method 1 - Soil/Water Agitation

A clear jar was partially filled with the soil/fill sample. Sufficient water was added to saturate the soil and bring the water level to about 1 cm above the soil surface. The jar was sealed, and the sample was agitated by shaking. The jar was then opened to check for the presence of a sheen on the water surface. If a sheen was present, the soils were contaminated by free product. If no sheen was present, the soils were either contaminated with dissolved product or were free of contamination. The presence of a sheen was checked under various lighting conditions and backgrounds since these factors affect the visibility of the sheen.

Method 2 - Field Sorption Method

This method was used to sorb free product from contaminated soils. A sample of the soil/fill was pressed against a brown paper bag for about 10 seconds. Soils contaminated by free product resulted in a "greasy" staining of the bag. The stain is more pronounced with fuel oils than for gasoline.

The FID was calibrated prior to use with 100 parts per million (ppm) methane gas.

During the removal of soil from over the top and to the sides of UST E-13/2, no potentially contaminated soil was identified by ETI personnel. Soil removed from over the UST was used as backfill following the completion of site investigation activities.

Soil within the UST excavation consisted of the following:

- 0" - 4' Brown medium to fine gravelly Sand;
- 4" - 6' White fine Sand.

Following the removal of the UST from the excavation, a total of five (5) post-excavation soil samples (sample designations E-1 through E-5) were collected from the base of the UST excavation from a depth of approximately six (6) feet below grade. Post-excavation soil samples collected from the base of the excavation for the closure of UST E-13/2 were collected from locations that corresponded with the UST's former centerline and sides. The locations and designations of post-excavation soil samples collected from the base of UST excavation are included in Figure 3.

Post-excavation soil samples collected from below UST E-13/2 were submitted to Veritech Environmental and Analytical Services (Veritech), NJDEP Certification #14622, for analysis of total petroleum hydrocarbons (TPH), volatile organic compounds plus ten (10) unknown peaks (VO+10), and total xylene. The TPH analyses were to be completed by the laboratory first. If the TPH results indicated a TPH concentration greater than 1,000 ppm in any of the post-excavation soil samples collected from a single UST excavation, 25% of those samples would be analyzed for VO+10 and total xylene. If the results showed no TPH concentration greater than 1,000 ppm, no additional analyses were to be required.

A chain of custody accompanied post-excavation soil samples from the time of collection to the time they were received by the appointed lab for analyses.

Following the collection of post-excavation soil samples from the base of the excavation created for the removal of UST E-13/2, the excavation was filled with the clean excavated soil removed from over the top and sides of the UST and additional clean fill. Manifests for the clean fill material brought onto the Earle facility to be used as backfill within the UST excavations are included in Appendix III.

3.0 RESULTS

3.1 Chemical Analysis of Soil

A total of five (5) post-excavation soil samples were collected from the base of the excavation created for the removal of UST E-13/2. Post-excavation soil samples collected for UST E-13/2's removal were collected from an approximate depth of six (6) feet below grade from locations that corresponded with the former USTs centerline and sides. Post-excavation soil samples collected from the base of UST E-13/2's excavation were designated E-1 through E-5. Locations and designations of representative soil samples collected below UST E-13/2 are shown in Figure 3.

The analytical results of the post-excavation soil samples collected from these sample locations indicated that post-excavation soil sample E-1 contained a TPH concentration of 35 ppm, post-excavation soil sample E-2 resulted in a TPH concentration of 29 ppm, post-excavation soil sample E-3 resulted in a non-detectable (ND) TPH concentration, post-excavation soil sample E-4 resulted in a TPH concentration of 5,200 ppm, and post-excavation soil sample E-5 resulted in a non-detectable (ND) TPH concentration. The results of the TPH analyses on the soil samples are included in Table 1.

As post-excavation soil sample E-4 resulted in a TPH concentration greater than 1,000 ppm, this sample was run for the additional parameters VO+10 and total xylene.

The results of the additional analyses completed on sample E-4 indicated detectable concentrations of methylene chloride (47 parts per billion [ppb]), and acetone (170 ppb). As both these compounds were reported within the laboratory's daily method blank, it is ETI's opinion that these compounds are laboratory introduced contaminants and their presence is not indicative of the soil quality below the former location of UST E-13/2.

In addition to the above mentioned compounds, post-excavation soil sample E-4 resulted in detectable concentrations of tetrachloroethene (6 ppb) and total xylene (22 ppb). No additional target VO compounds were reported for this sample. VO tentatively identified compounds (TICs) were reported at a total concentration of 8,921 ppb.

The field blank sample that accompanied the soil samples to the laboratory resulted in a detectable concentration of the target VO compound chloroform (1 ppb). No other target VO compounds were reported for this sample and VO TICs were reported as non-detectable.

Results of the VO analysis on soil sample E-4 are included in Table 2. The laboratory package for the Site Investigation is included in Appendix IV.

4.0 CONCLUSIONS

After reviewing the data collected during Earle's Site Investigation, the following conclusions may be made:

- A single formerly existing heating oil UST at the Earle facility designated as UST E-13/2 removed/closed on June 8, 1995;
- No indications of a discharge were observed in the soils overlying and to the sides of the UST;
- As the soil removed from the excavation showed no indication of contamination, the excavated soil was used as backfill within the UST;
- No ground water was observed within the soils underlying the UST;

- None of the five (5) post-excavation soil samples collected from below the base of the UST resulted in a concentration of TPH or VO compounds that exceeded the limits set for impact to ground water within the NJDEP's February 3, 1994 Soil Cleanup Criteria.

5.0 RECOMMENDATIONS

As the results of the VO analysis on post-excavation soil sample E-4 indicated no target VO compound with a concentration in excess of the NJDEP's guideline concentrations for Impact to Ground Water soils, it is ETI's recommendation that no additional investigations be required for the closure of UST E-13/2.

The Underground Storage Tank Site Assessment Summary is attached with this report.

FIGURES

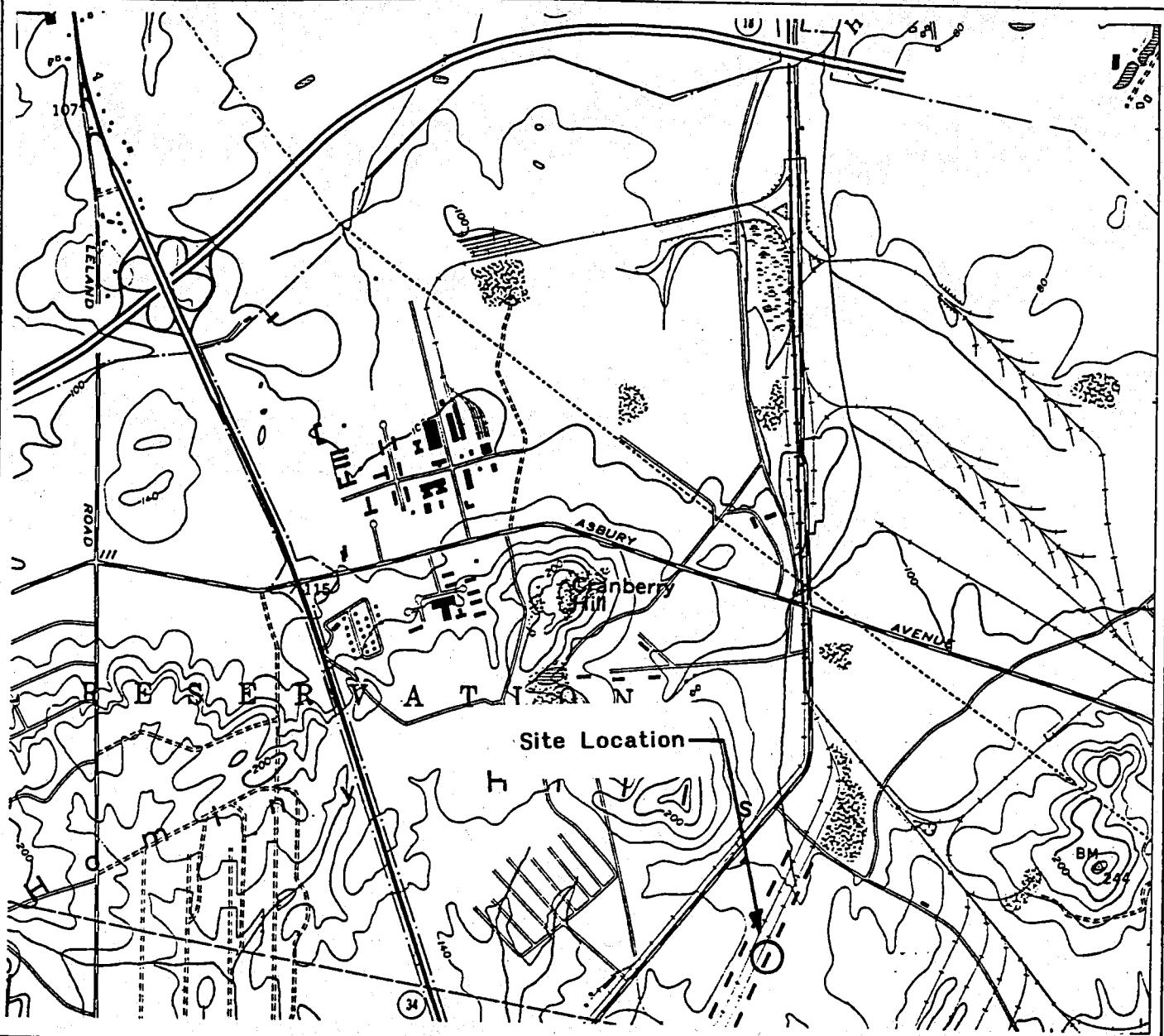
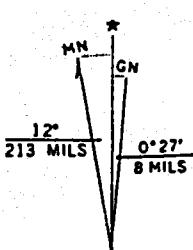
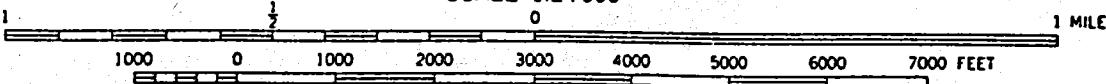


Figure 1
SITE LOCATION PLOT

United States Naval Weapons Station - Earle

Colts Neck, New Jersey

SCALE 1:24 000



Enviro-Tech Inc.
364 Broad Street
Keyport, NJ 07735-1619

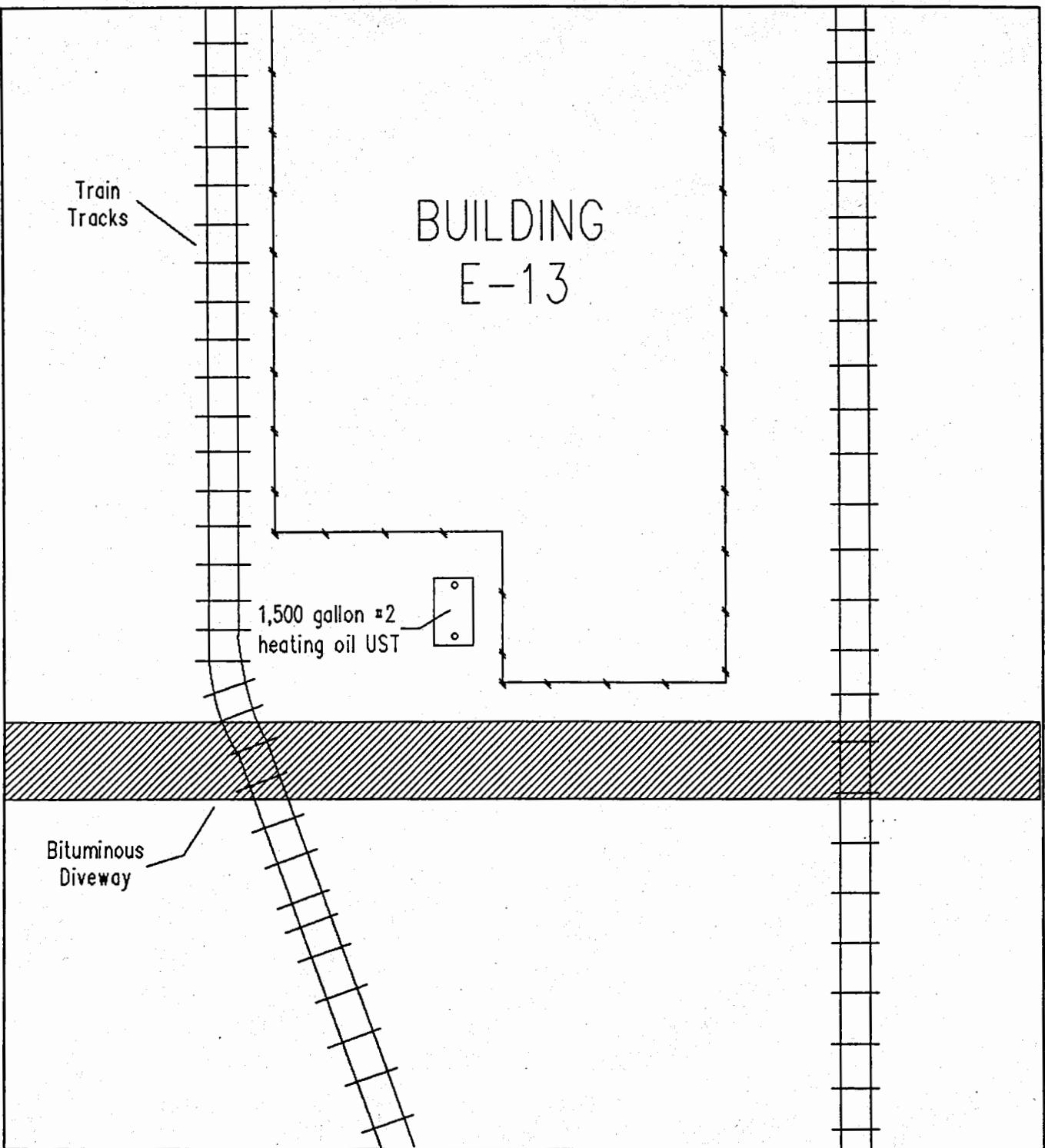


Figure 2
SITE PLAN

UNITED STATES NAVAL WEAPONS STATION EARLE
Colts Neck, Monmouth County, New Jersey

Scale: 1" = 20'

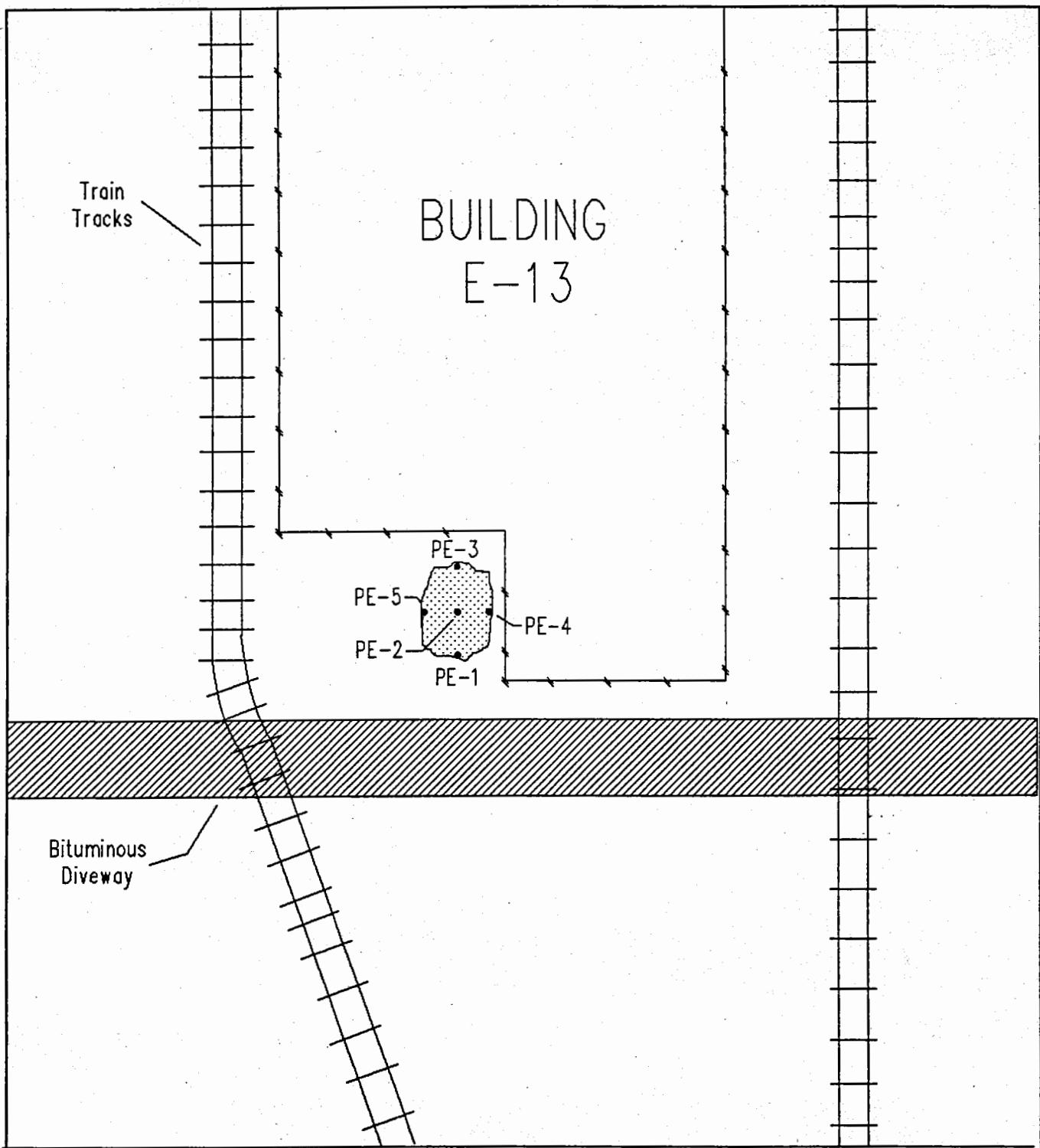


Figure 3
Post-excavation Soil Sample Locations for UST E-13/2
UNITED STATES NAVAL WEAPONS STATION EARLE
Colts Neck, Monmouth County, New Jersey

Scale: 1" = 20'

TABLES

Table 1

**SUMMARY OF TPH ANALYTICAL RESULTS FOR #2 HEATING OIL
UST POST-EXCAVATION SOIL SAMPLES**

**United States Naval Weapons Station Earle
Monmouth County, New Jersey**

Underground Storage Tanks E-13/2

(June 8, 1995)

<u>SAMPLE #</u>	<u>TPH RESULT (ppm)</u>
D2-1	35
D2-2	29
D2-3	ND
D2-4	5,200
D2-5	ND

Notes: ND = Compound was not detected.

Table 2

**SUMMARY OF VO ANALYTICAL RESULTS FOR #2 HEATING OIL UST
POST-EXCAVATION SOIL SAMPLE E-4**
United States Naval Weapons Station Earle
Monmouth County, New Jersey

Underground Storage Tank E-13/2

(June 8, 1995)

<u>Soil Sample #'s</u>	<u>E-4</u>	<u>FB</u>
VO Compounds (ug/kg)		
Chloromethane	-	ND
Bromomethane	-	ND
Vinyl Chloride	-	ND
Chloroethane	-	ND
Methylene Chloride	-	47JB
Acetone	-	170B
Trichlorofluoromethane	-	ND
1,1-Dichloroethene	-	ND
1,1-Dichloroethane	-	ND
trans-1,2-Dichloroethane	-	ND
Chloroform	-	ND
1,2-Dichloroethane	-	ND
1,1,1-Trichloroethane	-	ND
Carbon Tetrachloride	-	ND
Bromodichloromethane	-	ND
1,2-Dichloropropane	-	ND
Trichloroethene	-	ND
Dibromochloromethane	-	ND
1,1,2-Trichloroethane	-	ND
Benzene	-	ND
trans-1,3-Dichloropropene	-	ND
2-Chloroethylvinyl ether	-	ND
Bromoform	-	ND
Tetrachloroethene	-	6
1,1,2,2-Tetrachloroethane	-	ND
Toluene	-	ND
Chlorobenzene	-	ND
Ethylbenzene	-	ND
o-Xylene	-	8J
m/p-Xylenes	-	14J
1,3-Dichlorobenzene	-	ND
1,2-Dichlorobenzene	-	ND
1,4-Dichlorobenzene	-	ND
Total VO Compounds *	-	28
Total VO TICs *	-	8,921
Methyl-tert-butyl ether	-	ND
Tert-butyl alcohol	-	ND

Notes: ND = Compound was not detected.

* = "Totals" should be considered estimated values.

J = Compound was detected below the laboratory's MDL.

B = Compound was detected within laboratory's method blank.

APPENDIX I

RESIDUAL PRODUCT AND BOTTOM SLUDGE DISPOSAL MANIFEST

FROM : CENTRAL PUMP

PHONE NO. : 908 780 5113

Jun. 13 1995 03:05PM P2



RD1 Box 5A
Old Bridge, N.J. 08857
(908) 721-0900
Fax (908) 721-0231

STANDARD
COLLECTION
ORDER FORM

96139

GENERATOR LOCATION

OFFICE USE ONLY

BILL TO (IF DIFFERENT FROM LOCATION)

NAME	INFORMATION FAX LINE	ACCOUNT APPROVAL CODE
ADDRESS	INFORMATION FAX LINE	1101
CITY	STATE	ZIP
PHONE NUMBER	PURCHASE ORDER NUMBER	EXPIRATION DATE
TELEFAX NO. (IF APPLICABLE)	STATE NO.	MANIFEST NUMBER

NAME	INFORMATION FAX LINE	ACCOUNT APPROVAL CODE
ADDRESS	INFORMATION FAX LINE	1101
CITY	STATE	ZIP
PHONE NUMBER	PURCHASE ORDER NUMBER	EXPIRATION DATE
TELEFAX NO. (IF APPLICABLE)	STATE NO.	MANIFEST NUMBER

SHIPPING INFORMATION

This is to certify that the below named materials are "properly" classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)

SALES REPRESENTATIVE

SERVICE SECTION

SALES CODE	DESCRIPTION	WASTE CODE	QUANTITY	UNIT OF MEASURE	PRICE	TAX	LINE TOTAL
40500	USED OIL REMOVAL						
40501	OIL/WATER DISPOSAL	X722	1,000	gallons			
40502	SLUDGE DISPOSAL						
41000	NON-HAZARDOUS DISPOSAL						
41001	RCRA WASTE DISPOSAL						
41500	VAC TRUCK & OPERATOR		1000 AM 3 1000				
41501	DRUM DISPOSAL						
41502	SEPARATOR CLEANING						
41503	QAQC ANALYTICAL TESTING						
41504	TANK CLEANING						
41505	CONFINED SPACE ENTRY						
42000	MANIFEST PROCESSING FEE						
42001	DEXSIL TEST KIT						
							TOTAL

CHARGE MY ACCOUNT FOR THIS TRANSACTION
UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION

INVOICES REFLECTING CHARGES TO CUSTOMERS

ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 14% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTIONS INCLUDING REASONABLE ATTORNEY'S FEES.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCBs) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING, BUT NOT LIMITED TO 40 CFR PART 261. GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is
in accordance the N.J.A.C. 7:26-12.1 et seq. LORCO has the required
permits to accept the above described waste.

Print Name

Signature

GENERATOR/CUSTOMER

Date

LARGE
QUANTITY
GENERATOR
CERTIFICATIONDEXSIL CDT
TEST RESULTS

<1000 PPM

In accordance with 40 CFR 265.543(s) LORCO has notified the US EPA of its location and used oil management activities.

Print Name

Signature

LORCO REPRESENTATIVE

Date

E 13 1n

APPENDIX II
UST DISPOSAL MANIFEST

111272

Neptune Iron & Metal Recycling Co., Inc.*Ferrous & Non-Ferrous Metals-Container Service*101 MEMORIAL DRIVE at 11th Avenue
NEPTUNE, NJ. 07753(908) 774-4100
(908) 774-5606DATE 6/13/95NAME Ernest W. Gandy Jr.ADDRESS: 360 Fairfield Rd. Freehold

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	LIGHT IRON <input type="checkbox"/>		
	CARS <input type="checkbox"/>		
11.00	HEAVY IRON <input checked="" type="checkbox"/> Janitor	1-	11.00
	CAST IRON <input type="checkbox"/>		
	D-MOTORS <input type="checkbox"/>		
	#1 COPPER <input type="checkbox"/>		
	#2 COPPER <input type="checkbox"/>		
	L-COPPER <input type="checkbox"/> INSULATED <input type="checkbox"/>		
	Y. BRASS <input type="checkbox"/> TNGS <input type="checkbox"/>		
	RED-BRASS <input type="checkbox"/> TNGS <input type="checkbox"/>		
	ALUM <input type="checkbox"/> TNGS <input type="checkbox"/>		
	RADIATORS <input type="checkbox"/>		
	LEAD <input type="checkbox"/>		
	BATTERY, BOXES <input type="checkbox"/>		
	ZINC <input type="checkbox"/> DIE CAST <input type="checkbox"/>		
	STAINLESS STEEL <input type="checkbox"/> S.S. TNGS <input type="checkbox"/>		

All claims and returned goods MUST be accompanied by this bill.

Rec'd by 

APPENDIX III
CLEAN FILL CERTIFICATION

**CENTRAL PUMP & TANK
SERVICE CORP.**

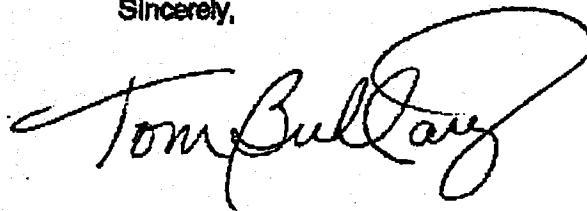
August 8, 1995

Clean Fill Certification
For: Earle Naval Weapons Station
Highway 34
Colts Neck, NJ
Building E-13-2

To Whom it May Concern,

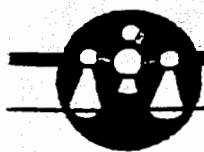
In regards to the fill material that was used at the above referenced location the fill was purchased from Millington Quarry and to the best of our knowledge is clean material.

Sincerely,



Central Pump & Tank

APPENDIX IV
LABORATORY ANALYTICAL PACKAGE



veritech

environmental and analytical services

Division of Hampton-Clarke, Inc.

**ENVIRO-TECH, INC.
NJDEP REDUCED PKG**

PROJECT: EARLE NAVAL WEAPONS

LAB # AA31044-AA31049

**NJDEP Cert. #14622, CT Cert. # PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. # 11408**

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SAMPLE KEY

Enviro-Tech No.

E-1
E-2
E-3
E-4
E-5
Field Blank

VERITECH No.

AA31044
AA31045
AA31046
AA31047
AA31048
AA31049

Enviro-Tech Inc.

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

SAMPLER: (Signature) Kenneth Brack
Phone 908 828-1300

Date Shipped 6/9/95
Airbill No. _____

Carrier Kerite-6 60M
Cooler No. 8

SHIP TO:

SEND RESULTS TO:

Client Name Kenneth Braitley

Company Enviro Tech inc

Address 364 Broad st

Hopewell, NJ 07735

Phone (908) 1888-1300

ATTENTION: _____

PROJECT NAME Eark Naval Weapons PROJECT NO. E 13 P.O. NO.

Relinquished by: (Signature) **Received by:** (Signature) **Date** **Military Time**

Kenneth B. S. Glenwood, Miss 6/9/95 (000

Relinquished by: (Signature) Received by: (Signature) Date Military Time

Handwriting Name: A. Schmitz Date: 6/9/95 Page: 133

Belinquished from lab by: (Signature) Received by: (Signature) Date Military Time

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time Sampled	Analysis Requested		Sample Condition Upon Receipt
E1	Soil	6/18/95	*	TPH C	*
E2					31045
E3					31046
E4					31047
E5					31048
Field Blank	Aquos.		—		31049

Special Instructions/Comments:

* If over 1,000 ppm of T.p.h.c. call
for approval to run Vorto

Cooler temp. 4°

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected

Analytical

T.A.T.'s

Immediate

ARRHED (200% surcharge)

RUSH (50-100% surcharge)

Standard

000002



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environmental and analytical services

Division of Hampton-Clarke, Inc.

CONDITION UPON RECEIPT FORM

Date Received JUNE 9, 1995

Filed By GERARD D. MIZIO

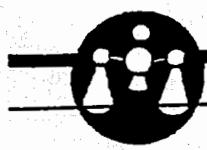
Client ENVIRO TECH INC.

Lab Sample No(s) _____

Project - EARLIE NAVAL WEAPONS

CONDITION (Check Applicable Items)

- (1) Not enough sample sent for analysis
- (2) Sample(s) received broken (Specify) _____
Sample(s) received leaking (Specify) _____
- (3) Illegible sample number(s) or label(s) missing from bottle(s)
(Specify) _____
- (4) Numbers on sample(s) do not correspond to information on the
chain of custody record
- (5) No chain of custody record submitted with the samples
- (6) Samples received without a cooler
- (7) Custody seals missing or broken (circle one)
- (8) Holding time(s) exceeded upon receipt
(List parameters) _____
- (9) Samples received without proper refrigeration when deemed
necessary
- (10) Samples received without proper preservation (see Preservation
Form for actual pH readings)
- (11) Cooler Temperature Upon Receipt (Specify) 4 _____
- (12) Other (Specify) _____



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Division of Hampton-Clarke, Inc.

environmental and analytical services

PRESERVATION DOCUMENTATION FORM

Date Received JUNE 9 1995

Filed By GERARD DiMIZIO

Client: Enviro-Tech Inc.

Lab Sample No(s)

Project - Earle Naval Weapons

PRESERV

47 Carey Avenue • Butler, NJ 07405

Phone: (201) 492-8744

Fax: (201) 492-1815

000004



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environmental and analytical services

0334

Division of Hampton-Clarke, Inc.

INTERNAL CHAIN OF CUSTODY RECORD

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	REMOVED FROM	SIGNATURE
Hg 11-20	30154, 30155	method table	6/1/45	1:30		
Hg 11-18	30242, 30629, 30254	3				
	30843, 30264, 30244	↓				
	30267, 30271	3				
TDS (EPA)	30158, 59	3	5/7	15:30	J. Scott	
TD-WZ	30816 → 822	3	6-8	7:45	J. Scott	
TCLP	30596, 97, 98, 99	EXTRACTOR	6-9	8:30	J. Scott	
TCLP-TD	30909	3	6-8	10:30	J. Scott	
GC/MJ	30749, 30909	3	..	4:00	J. Scott	
TPH	30909	3	6-8	3:30	W.O.	
PCB	30909	3	6-8	3:30	W.O.	
TSP-TDS	30158 & 9 EPA lot	WET LAB	6/8	3:30	J. Scott	
TCLP-TD	30871, 849	3	6-9	8:15	J. Scott	
TD-SO ₂	30845, 750	3	J. Scott	
mg	30886, 797, 97, 909 ER	3	6/9	9:00	J. Scott	
Cl, S ₂ , Cl, TPA	30465, 748, 50, 22, 55	3	6/9	10:30	J. Scott	
	56 → 3.60 48 → 74	↓	↓	↓	J. Scott	
	30212 → 1F, 3, 41	↓	↓	↓	J. Scott	
30742, 30944	0.0m	3				
30701, 30762	6/1/45	↓				
30940, 70945	6/1/45					
TCLP-MER	30940-30945	3	6/9	2:24	J. Scott	
	30909, 30962	↓	↓	↓	J. Scott	

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
H ₂ O	30154, 30155	WORKS table	6/1/95	6:35	<i>[Signature]</i>
TCIP	30242, 30689				
	30254, 30243, 30764				
	30224, 30269, 30221				
TPS TPAI	30224-159	3	6/1/95	18:55	<i>[Signature]</i>
TPM	30258	Sample deplated	6/1/95	20:45	<i>[Signature]</i>
TD-1D I	30816 → 822	3	6-9	9:13	<i>[Signature]</i>
TCLP	30856, 97, 99, 90, 4	3	6-9	10:35	<i>[Signature]</i>
TCLP	30506, 97, 99, 90, 4	3	6-9	11:30	<i>[Signature]</i>
TPH	30909	3	6-8	3:38	140
PCB	30909	3	6-8	3:38	140
TSS TDS	30845, 30750	Wet lab sample	6/18	14:30	<i>[Signature]</i>
TP- Soil	30946, 97, 99, 90, 4	3	6-9	9:10	<i>[Signature]</i>
Hg	30971- 819	3	6-9	9:20	<i>[Signature]</i>
TCLP- TD	30971- 819	3	6-9	9:50	<i>[Signature]</i>
TPH 90, 5, 1/4	30111, 30112 → 23, 23 → 15 4 → 54, 36 → 60, 1/2	3	6/1-9	12:00	<i>[Signature]</i>
	60 → 74, 30, 102 → 19	1	6		
TCIP- Met	30940-30945	3	6-9	3:45	<i>[Signature]</i>
	30909-30962	1	6		
	30912-30913 → 94	3	6/9	10:55	<i>[Signature]</i>
	30912-30913 → 94	50014C 123/123	6/15	14:30	<i>[Signature]</i>

47 Carey Avenue • Butler, NJ 07405

Phone: (201) 492-8744

Fax: (201) 492-1815

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0335

Division of Hampton-Clarke, Inc.



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environmental and analytical services

INTERNAL CHAIN OF CUSTODY RECORD

PARAMETER	SAMPLE NO.	COLDBOX NO.	REMOVED FROM	DATE	TIME	SIGNATURE
TPH	30940 → 952-37	3		6/9	9:00	
↓	30940 → 952-37	↓		↓	↓	
↓ TPH	30940 → 952-37	3		6/9	10:00	
↓ TPH	Push 30940 → 952-37	3		6/9	10:00	
↓ TPH	30940 → 952-37	3		6/10	↓	
↓ TPH	30940 → 952-37	3		6/10	↓	
ID-SOI	30940 → 954	3		6-12	8:00	SOI
↓	30940 → 954	↓		↓	↓	
↓	30940 → 954	3		↓	↓	
PST/PCB	30940 → 954	3		6-12	8:45	
ID-SOI	30940 → 954	3		6-12	8:50	SOI
↓	30940 → 954	3		↓	↓	
TCH	30940 → 954	3		6-12	12:55	
TCH	30940 → 954	3		↓	↓	
↓	30940 → 954	3		↓	↓	
TCH	30940 → 954	3		6/12	1:30	
(GCM)	30940 → 954	3		6/12	4:30	
BN	30940 → 954	3		6/13	8:00	
SOI/ID	30940 → 954	3		6/13	8:00	SOI
TCH	30940 → 954	3		6/13	8:00	
TCH	30940 → 945	EXTRACTOR		6-13	8:40	SOI
↓	30940 → 945	↓		↓	↓	
TCLP-TD	30940 → 945	3		6-13	9:01	
↓	30940 → 945	3		↓	↓	

RETURNED TO

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
TPH	30940 → 952-37	3	6-12	10:30	
PST/DCB	30940 → 952-37	3	6-12	9:05	
ID-SOI	30940 → 954	3	6-12	8:50	
↓	30940 → 954	↓	↓	↓	
ID-SOI	30940 → 954	3	6-12	9:40	SOI
CTG	30940 → 954	3	6-12	14:30	
TCH	30940 → 954	3	6-12	14:30	
↓	30940 → 954	3	↓	↓	
↓	30940 → 954	3	↓	↓	
ID-SOI	30940 → 954	3	6-13	8:00	
TCH	30940 → 954	3	6-13	8:00	
BN	30940 → 954	3	6-13	8:00	
SOI/ID	30940 → 954	3	6-13	8:00	SOI
TCH	30940 → 954	3	6-13	8:00	
TCH	30940 → 945	3	6-13	9:00	
↓	30940 → 945	↓	↓	↓	
TCLP-TD	30940 → 945	3	6-13	11:45	
↓	30940 → 945	3	↓	↓	

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47 Carey Avenue • Butler, NJ 07405

Phone: (201) 492-8744

Fax: (201) 492-1815

**VERITECH INTERNAL CHAIN OF CUSTODY RECORD
REFRIGERATOR # 2**

PARAMETER	RFRG FROM	RFRG TO	SAMPLE NUMBER(S)	DATE OUT	TIME OUT	DATE IN*	TIME IN	SIGNATURE
GC/MS	2	2	30651 ~ 30661	5/16	6:47	5/16	7:01	
TD-502	2		30653	5-30	7:50			
"	2		30731 ~ 30736, 30738 ~ 30741, 30743 ~ 30746	"	7:50			
"	2	2	30654, 30660	"	8:18	5/16	8:57	
"	2		30670	"	8:41			
"	2	2	30754, 30764, 30659, 30661	"	8:44	5/16	8:55	
"	2	2	30658, 30659	"	8:47	5/16	8:57	
"	2	2	30746 (back up vial)	5/16	9:55			
"	2	2	30764	"	11:15	5/16	11:17	
"	2	2	30769 ~ 30773	"	5:10	"	5:17	
"	2	2	30774 ~ 30775	"	5:19	"	5:21	
"	2	2	30761	"	6:00			
"	2	2	30696	06/01	7:44	06/01	7:51	
GC/MS	2	1	30770	06/01	7:49	06/01	6:44	
GC/MS	2	1	30844	6/2	9:10	6/2	9:10	
GC/MS	2	2	30776 ~ 30778	6/2	11:17	"	11:31	
"	2	2	30731, 30733 ~ 30735	"	11:44	"	4:57	
"	2	2	30739, 30743, 30744, 30776	"	6:38	"	6:47	
GC/MS	2	3	30845	6/5	12:00	6/5	12:00	
GC/MS	2	2	30816 ~ 30817	"	1:00	"		
"	2	2	30660	"	11:31	6/5	11:35	
"	2	2	30766	"	5:50	"		
"	2	2	30759, 30770, 30771, 30772	"	6:17	6/5	6:31	
TPH	2		30873	"	9:45			
GC/MS	2	2	30743	"	1:19	6/6	11:19	
"	2	2	30759, 30770	"	6:00	"		
"	2	2	30713, 30750, 30751 ~ 30753	"	6:45	"	7:01	
"	2	2	30891, 30892, 30894 ~ 30895	6/07	3:15			
"	2	2	30753	"	4:01			
"	2	2	30914, 30915, 30917, 30919	"	4:12	6/07	4:17	
"	2	2	30921 ~ 30927, 30928, 30966 (back up)	"	5:25			
"	2	2	30945 ~ 30948, 30949, 30953	"	6:11	6/07	6:20	
"	2	2	30955 ~ 30957 (back up vial)	6/08	11:03	6/07	11:21	
"	2	2	30731	"	13:11			
"	2	2	30789	"	5:11	6/09	5:17	
"	2	2	30855, 30857	"	5:40	"	5:43	
"	2	2	30909, 30719, 30716	"	5:59	"	6:10	
"	2	2	31016 ~ 31017, 31018	6/09	10:33			
"	2	2	30944 ~ 30953	"	5:47	6/09	5:51	
"	2	2	30955, 30961	"	5:49	6/09	6:23	
"	2	2	30944, 30956 ~ 30961, 30966 (back up)	"	6:15	6/09	6:23	
"	2	2	30871 ~ 30873	"	6:29			
"	2	2	31073, 31078	"	7:04	6/09	7:11	
"	2	2	30914 ~ 30916, 30963 ~ 30967	6/12	11:47	6/12	5:05	
"	2	2	31047, 31051, 30957, 30960	"	12:58	6/12	5:49	
"	2	2	30899, 30901	"	5:33	"		
"	2	2	30944, 30947, 30951 ~ 30954, 30956	"	6:10	6/12	6:11	
"	2	2	30962, 31051, 30944	"	6:11	6/12	6:57	
"	2	2	30951, 30956, 30944, 30947, 30948, 30951	6/13	3:22	6/13	3:55	

COMMENTS: * - Aqueous volatile samples are not logged back into the refrigerator

0000017

VERITECH INTERNAL CHAIN OF CUSTODY RECORD
REFRIGERATOR # 2

COMMENTS: *-Aqueous volatile samples are not logged back into the refrigerator

000003

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)

Date: 06-23-1995 Time: 11:33:42

Sample I.D. AA31044

Status: In final report queue

Priority: 24 HR TA

Deliverables: REDUCED

Client ID: ENVIRO

Project Account Code: EARLE

CONTAIN: 2

Date collected: 06/08/95

Date submitted: 06/09/95

Due date: 06/22/95

Specification checking: off

Descript: E1 SOIL

COL.DATE: 6/8/95

Analysis

Analysis	Result	Unit	Finished Anl
%SOLIDS	84	PERCENT	06/09/95 JK
TPH-SOIL	35	mg/kg dry wt	06/09/95 JK
TPH EXTRACTION	Completed		06/09/95 JK

End of progress report on sample: AA31044

000000

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)

Date: 06-23-1995 Time: 11:33:42

Sample I.D. AA31045

Status: In final report queue

Priority: 24 HR TA

Deliverables: REDUCED

Client ID: ENVIRO

Project Account Code: EARLE

CONTAIN: 2

Date collected: 06/08/95

Date submitted: 06/09/95

Due date: 06/22/95

Specification checking: off

Descript: E2 SOIL

COL.DATE: 6/8/95

Analysis

%SOLIDS
TPH-SOIL
TPH EXTRACTION

	Result	Unit	Finished Anl
%SOLIDS	75	PERCENT	06/09/95 JK
TPH-SOIL	29	mg/kg dry wt	06/09/95 JK
TPH EXTRACTION	Completed		06/09/95 JK

End of progress report on sample: AA31045

000010

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)

Date: 06-23-1995 Time: 11:33:43

Sample I.D. AA31046

Status: In final report queue

Priority: 24 HR TA

Deliverables: REDUCED

Client ID: ENVIRO

Project Account Code: EARLE

CONTAIN: 2

Date collected: 06/08/95

Date submitted: 06/09/95

Due date: 06/22/95

Specification checking: off

Descript: E3 SOIL

COL.DATE: 6/8/95

Analysis

%SOLIDS

TPH-SOIL

TPH EXTRACTION

Result	Unit	Finished An.
79	PERCENT	06/09/95 JK
Not detected	mg/kg dry wt	06/09/95 JK
Completed		06/09/95 JK

End of progress report on sample: AA31046

000011

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)

Date: 06-23-1995 Time: 11:33:43

Sample I.D. AA31047

Status: In final report queue

Priority: 24 HR TA

Deliverables: REDUCED

Client ID: ENVIRO

Project Account Code: EARLE

CONTAIN: 2

Date collected: 06/08/95

Date submitted: 06/09/95

Due date: 06/22/95

Specification checking: off

Descript: E4 SOIL

COL.DATE: 6/8/95

Analysis

%SOLIDS
TPH-SOIL
TPH EXTRACTION
VOLATILES + 10

	Result	Unit	Finished Anl
%SOLIDS	89	PERCENT	06/09/95 JK
TPH-SOIL	5200	mg/kg dry wt	06/09/95 JK
TPH EXTRACTION	Completed		06/09/95 JK
VOLATILES + 10	Completed	ATTACHED	06/12/95 YS

End of progress report on sample: AA31047

000012

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-23-1995 Time: 11:33:44

Sample I.D. AA31048
Status: In final report queue
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/08/95
Date submitted: 06/09/95
Due date: 06/22/95
Specification checking: off
Descript: E5 SOIL

COL.DATE: 6/8/95

Analysis

%SOLIDS
TPH-SOIL
TPH EXTRACTION

	Result	Unit	Finished An.
%SOLIDS	79	PERCENT	06/09/95 JK
TPH-SOIL	Not detected	mg/kg dry wt	06/09/95 JK
TPH EXTRACTION	Completed		06/09/95 JK

End of progress report on sample: AA31048

000013

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-23-1995 Time: 11:33:45

Sample I.D. AA31049
Status: In final report queue
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/08/95
Date submitted: 06/09/95
Due date: 06/22/95
Specification checking: off
Descript: FIELD BLANK
COL.DATE: 6/8/95

Analysis

pH (VOA VIALS)
VOLATILES + 10

Result	Unit	Finished Anl
<2	UNITS	06/09/95 AS
Completed	ATTACHED	06/14/95 YS

End of progress report on sample: AA31049

000014

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

CLIENT: ENVIRO
ANALYSIS: VOLATILES

PROJECT: EARLE

NO	YES
----	-----

1. GC/MS Tune Specifications
 - a. BFB passed
 - b. DFTPP passed

_____	_____	X
_____	_____	_____
2. GC/MS Tuning Frequency - performed every 12 hours

_____	_____	X
_____	_____	_____
3. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hours before sample analysis.

_____	_____	X
_____	_____	_____
4. GC/MS Calibration Requirements
 - a. Calibration Check Compounds
 - b. System Performance Check Compounds

_____	_____	X
_____	_____	X
5. Blank Contamination - List compounds for each fraction
 - a. VOA Fraction See Form1.
 - b. B/N Fraction _____
 - c. Acid Fraction _____

_____	_____	_____
_____	_____	_____
6. Surrogate Recoveries Meet Criteria
(If not met; list those compounds and their recoveries which fall outside the acceptable range)
 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction _____

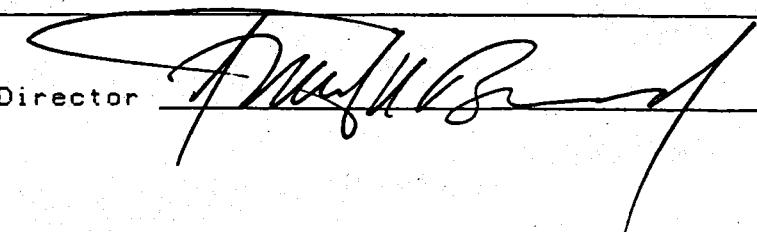
_____	_____	X
_____	_____	_____
7. Extraction Holding Time Met

_____	_____	X
Comments: _____	_____	_____
_____	_____	_____
8. Analysis Holding Time Met

_____	_____	X
Comments: _____	_____	_____
_____	_____	_____

Additional Comments: _____

Organics Director



Date: 06/19/95

000015

WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

No Yes

1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank: _____ _____

2. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria
(If not met, list the sample and corresponding recovery which falls outside the acceptable range) _____ _____

3. IR Spectra submitted for all standards, blanks, & samples _____ _____

4. Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted _____ _____

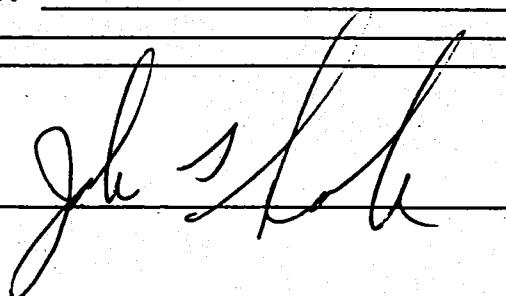
5. Extraction Holding Time Met _____

If not met, list number of days exceeded for each sample: _____

6. Analysis Holding Time Met _____

If not met, list number of days exceeded for each sample: _____

Additional Comments: _____

Wetlab Supervisor: 

Date: 6/13/95

00001C

METHOD REFERENCES

Volatile Organics (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters): *Methods for the Determination of Organic Compounds in Drinking Water*, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters): *Federal Register*, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion, Methods 6010 and 7470 for analysis.

ICP Metals (Waters): *Methods for the Determination of Metals in Environmental Samples*, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are

analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using Method 245.1.

Cyanide (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9010.

Cyanide (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 335.2.

Cyanide (Free): *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 4500-CN-I.

Phenols (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9065.

Phenols (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

TPH Extractables: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 3510 or 3550 and Modified Method 8015.

Hexavalent Chromium (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Second and Third Editions, Methods 3060 and 7196A.

Hexavalent Chromium (Waters): *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 3500-Cr D.

pH (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9040.

pH (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability: *Test Methods for Evaluating Solid Waste*, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1010.

Conductance (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.1.

000013

Veritech

Residue, Non-Filterable (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9252.

Sulfide (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters): *Hach Chemical Company*, Method 8000.

Oil & Grease (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils): *American Society for Testing & Materials (ASTM)*, D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF: *Modified Contract Laboratory Program Statement of Work*, November 1992.

000019

VERITECH
 47 CAREY AVE., BUTLER, NJ 07405
REPORT OF ANALYSIS

CT. NO: PH-0671
 MADEP NO: NJ386
 PADER NO: 68-463
 NJDEPE NO: 14622
 NYDOH NO: 11408

TO: ENVIRO-TECH, INC.
 364 BROAD STREET
 KEYPORT, N.J. 07735
 (908) 888-1300

Date Collected: 06/08/95
 Date Submitted: 06/09/95
 Date Reported: 06/23/95
 Project: EARLE

Sample I.D.

AA31044

AA31045

Sample Description

E1 SOIL

E2 SOIL

Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	84	1.0	75
TPH-SOIL	mg/kg dry wt	24	35	27	29
VOLATILES + 10					

Sample I.D.

AA31046

AA31047

Sample Description

E3 SOIL

E4 SOIL

Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	79	1.0	89
TPH-SOIL	mg/kg dry wt	25	Not detected	220	5200
VOLATILES + 10	ATTACHED				Completed

Sample I.D.

AA31048

AA31049

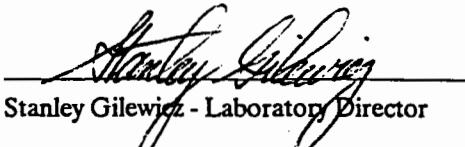
Sample Description

E5 SOIL

FIELD BLANK

Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	79		
TPH-SOIL	mg/kg dry wt	25	Not detected		
VOLATILES + 10	ATTACHED				Completed

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.


 Stanley Gilewicz - Laboratory Director

000020

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : _____
 Date Rcvd/Extd: _____
 Sample Matrix : Soil
 Percent Solid : 100
 Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : DAILY BL
 Lab File ID : >E4880
 Date Analyzed : 06/12/95
 Dilution Factor: 1
 Sample Wt/Vol : 5.0g

CONCENTRATION UNITS: UG/KG(PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	10	U	124481	Dibromochloromethane	5	U
74839	Bromomethane	10	U	79005	1,1,2-Trichloroethane	3	U
75014	Vinyl Chloride	5	U	71432	Benzene	1	U
75003	Chloroethane	10	U	10061026	Trans-1,3-Dichloropropene	5	U
75092	Methylene Chloride	10	J	110758	2-Chloroethylvinylether	10	U
67641	Acetone	20	12J	75252	Bromoform	4	U
75150	Carbon Disulfide	5	U	108101	4-Methyl-2-Pentanone	25	U
75694	Trichlorofluoromethane	5	U	591786	2-Hexanone	20	U
75354	1,1-Dichloroethene	2	U	127184	Tetrachloroethene	1	U
75343	1,1-Dichloroethane	5	U	79345	1,1,2,2-Tetrachloroethane	2	U
156605	Trans-1,2-Dichloroethene	5	U	108883	Toluene	5	U
67663	Chloroform	5	U	108907	Chlorobenzene	4	U
107062	1,2-Dichloroethane	2	U	100414	Ethylbenzene	5	U
78933	2-Butanone	25	U	100425	Styrene	5	U
71556	1,1,1-Trichloroethane	5	U	108383	m&p-Xylenes	5	U
56235	Carbon Tetrachloride	2	U	95476	o-Xylene	5	U
108054	Vinyl Acetate	10	U	541731	1,3-Dichlorobenzene	5	U
75274	Bromodichloromethane	1	U	95501	1,2-Dichlorobenzene	5	U
78875	1,2-Dichloropropane	1	U	106467	1,4-Dichlorobenzene	5	U
10061015	cis-1,3-Dichloropropene	5	U	1634044	Methyl-t-butyl ether	5	U
79016	Trichloroethene	1	U	108203	Di-isopropyl-ether	5	U
				75650	t-Butyl Alcohol	100	

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
- B - Indicates the analyte was found in the blank as well as in the sample.
- E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

000021

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

• _____ •

1

I DAILY BLK(SI)

Lab Name: VERITECH, NJDEPE CERT. #: 14622 Contract:-----

Lab Code: GC/MS

Case No.: -----

SAS No.: -----

SDG No.: -----

Matrix: SOIL

Client ID:

Sample wt/vol: 5.0(g/ml) g

Lab File ID: >E4880

Level: (low/med) LOW

Date Recvd/Ext:

% Solid: 100

Date Analyzed: 06/12/95

Column: CAP

Dilution Factor: 1

Number of TICs found: 0

CONCENTRATION UNITS: ug/Kg

Tentative Compound Summary:

Q

DATA REPORTING QUALIFIERS

A = Indicates an aldol condensate

[] = Indicates an estimated value

B - Indicates compound was found in the blank as well as in the sample

000022

QUANT REPORT

Page 1

Operator ID: LIN
 Output File: ^E4880::QT
 Data File: >E4880::D1
 Name: DAILY BLK(S)
 Misc: S

Quant Rev: 7 Quant Time: 950612 17:01
 Injected at: 950612 16:35
 Dilution Factor: 1.00000
 Instrument ID: MSD_1

ID File: IDSV01::D2
 Title: J&W DB-624 75M .53mm ID column
 Last Calibration: 950526 11:39

Last Qcal Time: 950612 15:31

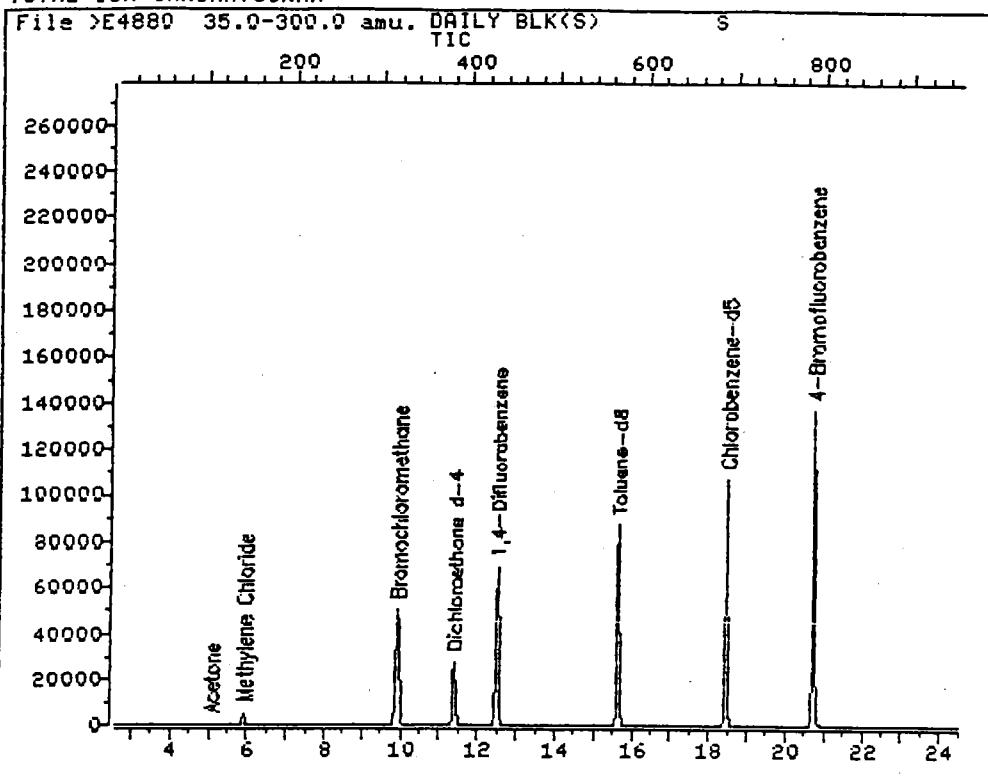
	Compound	R.T.	Scan#	Area	Conc	Units	Q
1)	*Bromochloromethane	9.92	319	40898	50.00	ug/L	99
9)	Methylene Chloride	5.93	145	5500	7.20	ug/L	93
10)	Acetone	7.02	102	2116	11.56	ug/L	82
19)	1,2-Dichloroethane-d4	11.59	363	12526	51.14	ug/L	97
28)	*1,4-Difluorobenzene	12.50	431	151167	50.00	ug/L	98
39)	*Chlorobenzene-d5	18.47	691	137993	50.00	ug/L	95
46)	Toluene d-8	15.64	568	145100	49.56	ug/L	97
53)	Bromofluorobenzene	20.72	789	116735	49.77	ug/L	97

* Compound is ISTD

000023

DB
6/19%

TOTAL ION CHROMATOGRAM



Data File: >E4880::D1
Name: DAILY BLK(S)
Misc: S

Quant Output File: ^E4880::QT
Instrument ID: MSD_1

Id File: IDSV01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950526 11:39 Last Qcal Time: 950612 15:31

Operator ID: LIN
Quant Time : 950612 17:01
Injected at: 950612 16:35

000024

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : _____
 Date Rcvd/Extd: _____
 Sample Matrix : Water
 Percent Solid : 0
 Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : DAILY BL
 Lab File ID : >E4927
 Date Analyzed : 06/14/95
 Dilution Factor: 1
 Sample Wt/Vol : 5.0ml

CONCENTRATION UNITS: UG/L (PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	10	U	124481	Dibromochloromethane	5	U
74839	Bromomethane	10	U	79005	1,1,2-Trichloroethane	3	U
75014	Vinyl Chloride	5	U	71432	Benzene	1	U
75003	Chloroethane	10	U	10061026	Trans-1,3-Dichloropropene	5	U
75092	Methylene Chloride	10	JJ	110758	2-Chloroethylvinylether	10	U
67641	Acetone	20	U	75252	Bromoform	4	U
75150	Carbon Disulfide	5	U	108101	4-Methyl-2-Pentanone	25	U
75694	Trichlorofluoromethane	5	U	591786	2-Hexanone	20	U
75354	1,1-Dichloroethene	2	U	127184	Tetrachloroethene	1	U
75343	1,1-Dichloroethane	5	U	79345	1,1,2,2-Tetrachloroethane	2	U
156605	Trans-1,2-Dichloroethene	5	U	108883	Toluene	5	U
67663	Chloroform	5	U	108907	Chlorobenzene	4	U
107062	1,2-Dichloroethane	2	U	100414	Ethylbenzene	5	U
78933	2-Butanone	25	U	100425	Styrene	5	U
71556	1,1,1-Trichloroethane	5	U	108383	m&p-Xylenes	5	U
56235	Carbon Tetrachloride	2	U	95476	o-Xylene	5	U
108054	Vinyl Acetate	10	U	541731	1,3-Dichlorobenzene	5	U
75274	Bromodichloromethane	1	U	95501	1,2-Dichlorobenzene	5	U
78875	1,2-Dichloropropane	1	U	106467	1,4-Dichlorobenzene	5	U
10061015	cis-1,3-Dichloropropene	5	U	1634044	Methyl-t-butyl ether	5	U
79016	Trichloroethene	1	U	108203	Di-isopropyl-ether	5	U
				75650	t-Butyl Alcohol	100	U

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
- B - Indicates the analyte was found in the blank as well as in the sample.
- E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

000025

1E

**VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS**

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-----

LAB SAMPLE NO.

DAILY BLK(A)

Lab. Code.: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix:: WATER Client ID:

Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >E4927

Level: (low/med) LOW Date Recvd/Ext:

% Solid: 0 Date Analyzed: 06/14/95

Column: CAP Dilution Factor: 1

Number of TICs found: 0 CONCENTRATION UNITS: ug/L

Tentative Compound Summary:

0

DATA REPORTING QUALIFIERS

A - Indicates an aldol condensate

J - Indicates an estimated value

B - Indicates compound was found in the blank as well as in the sample

000020

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : E4 SOIL
 Date Rcvd/Extd: 06/08/95-N/A
 Sample Matrix : Soil
 Percent Solid : 89
 Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : AA31047
 Lab File ID : E4883
 Date Analyzed : 06/12/95
 Dilution Factor: 5
 Sample Wt/Vol : 1.0g

CONCENTRATION UNITS: UG/KG(PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	56	U	124481	Dibromochloromethane	28	U
74839	Bromomethane	56	U	79005	1,1,2-Trichloroethane	17	U
75014	Vinyl Chloride	28	U	71432	Benzene	6	U
75003	Chloroethane	56	U	10061026	Trans-1,3-Dichloropropene	28	U
75092	Methylene Chloride	56	47JB	110758	2-Chloroethylvinylether	56	U
67641	Acetone	110	170 B	75252	Bromoform	22	U
75150	Carbon Disulfide	28	U	108101	4-Methyl-2-Pentanone	140	U
75694	Trichlorofluoromethane	28	U	591786	2-Hexanone	110	U
75354	1,1-Dichloroethene	11	U	127184	Tetrachloroethene	6	6
75343	1,1-Dichloroethane	28	U	79345	1,1,2,2-Tetrachloroethane	11	U
156605	Trans-1,2-Dichloroethene	28	U	108883	Toluene	28	U
67663	Chloroform	28	U	108907	Chlorobenzene	22	U
107062	1,2-Dichloroethane	11	U	100414	Ethylbenzene	28	U
78933	2-Butanone	140	U	100425	Styrene	28	U
71556	1,1,1-Trichloroethane	28	U	108383	m&p-Xylenes	28	14J
56235	Carbon Tetrachloride	11	U	95476	o-Xylene	28	8J
108054	Vinyl Acetate	56	U	541731	1,3-Dichlorobenzene	28	U
75274	Bromodichloromethane	6	U	95501	1,2-Dichlorobenzene	28	U
78875	1,2-Dichloropropene	6	U	106467	1,4-Dichlorobenzene	28	U
10061015	cis-1,3-Dichloropropene	28	U	1634044	Methyl-t-butyl ether	28	U
79016	Trichloroethene	6	U	108203	Di-isopropyl-ether	28	U
				75650	t-Butyl Alcohol	560	U

TARGET COMPOUND SUMMARY: 176

DATA REPORTING QUALIFIERS

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
- B - Indicates the analyte was found in the blank as well as in the sample.
- E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

000029

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

AA31047

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-----

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Client ID: E4 SOIL

Sample wt/vol: 1.0 (g/ml) g Lab File ID: E4883

Level: (low/med) LOW Date Recvd/Ext: 06/

% Solid: 89 Date Analyzed: 06/12/95

Column: CAP Dilution Factor: 5

Number of TICs found: 10

CONCENTRATION UNITS: ug/Kg

Tentative Compound Summary: 8921

DATA REPORTING QUALIFIERS

A - Indicates an aldol condensate

3 - Indicates an estimated value

B - Indicates compound was found in the blank as well as in the sample

000030

QUANT REPORT

Page 1

Operator ID: LIN
 Output File: ^E4883::QT
 Data File: >E4883::D1
 Name: AA31047
 Misc: S,1g

Quant Rev: 7 Quant Time: 950612 18:41
 Injected at: 950612 18:12
 Dilution Factor: 1.00000
 Instrument ID: MSD_1

ID File: IDSV01::D2
 Title: J&W DB-624 75M .53mm ID column
 Last Calibration: 950526 11:39

Last Qcal Time: 950612 15:31

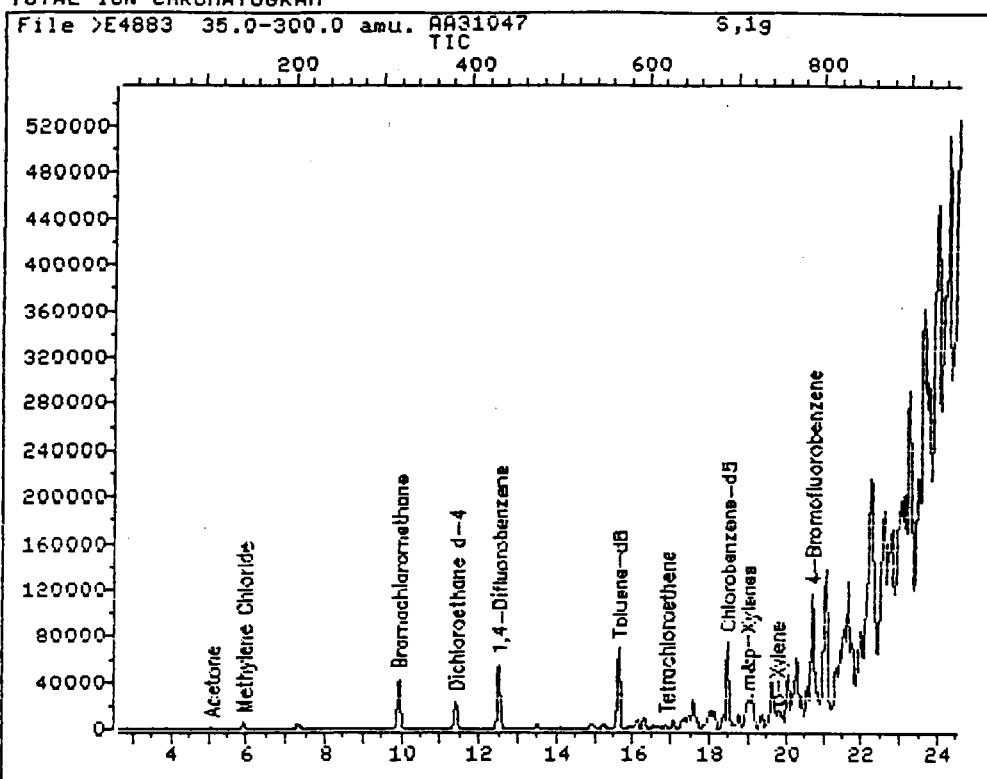
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.94	320	35022	50.00	ug/L	99
9)	Methylene Chloride	5.95	146	5451	8.33	ug/L	92
10)	Acetone	5.10	109	4781	30.36	ug/L	84
19)	1,2-Dichloroethane-d4	11.41	384	10653	50.79	ug/L	95
28)	*1,4-Difluorobenzene	12.51	432	122058	50.00	ug/L	97
39)	*Chlorobenzene-d5	18.46	691	95622	50.00	ug/L	95
43)	Tetrachloroethene	16.88	622	1178	1.15	ug/L	97
46)	Toluene d-8	15.64	568	105906	52.20	ug/L	95
50)	m&p-Xylenes	18.99	714	2294	2.48	ug/L	89
51)	o-Xylene	19.75	747	3006	1.39	ug/L	98
53)	Bromofluorobenzene	20.72	789	72629	44.69	ug/L	95

* Compound is ISTD



6/19/95
000031 DB
6/19/95

TOTAL ION CHROMATOGRAM



Data File: >E4883::D1
Name: AA31047
Misc: S,1g

Quant Output File: ^E4883::QT
Instrument ID: MSD_1

Id File: IDSV01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950526 11:39 Last Qcal Time: 950612 15:31

Operator ID: LIN
Quant Time : 950612 18:41
Injected at: 950612 18:12

000032

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : FIELD BLANK
 Date Rcvd/Extd: 06/08/95-N/A
 Sample Matrix : Water
 Percent Solid : 0
 Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : AA31049
 Lab File ID : >E4929
 Date Analyzed : 06/14/95
 Dilution Factor: 1
 Sample Wt/Vol : 5.0ml

CONCENTRATION UNITS: UG/L (PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	10	U	124481	Dibromochloromethane	5	U
74839	Bromomethane	10	U	79005	1,1,2-Trichloroethane	3	U
75014	Vinyl Chloride	5	U	71432	Benzene	1	U
75003	Chloroethane	10	U	10061026	Trans-1,3-Dichloropropene	5	U
75092	Methylene Chloride	10	4JB	110758	2-Chloroethylvinylether	10	U
67641	Acetone	20	U	75252	Bromoform	4	U
75150	Carbon Disulfide	5	U	108101	4-Methyl-2-Pentanone	25	U
75694	Trichlorofluoromethane	5	U	591786	2-Hexanone	20	U
75354	1,1-Dichloroethene	2	U	127184	Tetrachloroethene	1	U
75343	1,1-Dichloroethane	5	U	79345	1,1,2,2-Tetrachloroethane	2	U
156605	Trans-1,2-Dichloroethene	5	U	108883	Toluene	5	U
67663	Chloroform	5	IJ	108907	Chlorobenzene	4	U
107062	1,2-Dichloroethane	2	U	100414	Ethylbenzene	5	U
78933	2-Butanone	25	U	100425	Styrene	5	U
71556	1,1,1-Trichloroethane	5	U	108383	m&p-Xylenes	5	U
56235	Carbon Tetrachloride	2	U	95476	o-Xylene	5	U
108054	Vinyl Acetate	10	U	541731	1,3-Dichlorobenzene	5	U
75274	Bromodichloromethane	1	U	95501	1,2-Dichlorobenzene	5	U
78875	1,2-Dichloropropane	1	U	106467	1,4-Dichlorobenzene	5	U
10061015	cis-1,3-Dichloropropene	5	U	1634044	Methyl-t-butyl ether	5	U
79016	Trichloroethene	1	U	108203	Di-isopropyl-ether	5	U
				75650	t-Butyl Alcohol	100	U

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
- B - Indicates the analyte was found in the blank as well as in the sample.
- E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

000033

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-----

LAB SAMPLE NO.

AA31049

Lab Code: GC/MS

Case No.: -----

SAS No.: -----

SDG No.: -----

Matrix: WATER

Client ID: FIELD BLANK

Sample wt/vol: 5.0 (g/ml) ml

Lab File ID: >E4929

Level: (low/med) LOW

Date Recvd/Ext: 06/08/95-N/A

% Solid: 0

Date Analyzed: 06/14/95

Column: CAP

Dilution Factor: 1

Number of TICs found: 0

CONCENTRATION UNITS: ug/L

Tentative Compound Summary:

0

DATA REPORTING QUALIFIERS

- A - Indicates an aldol condensate
 - J - Indicates an estimated value
 - B - Indicates compound was found in the blank as well as in the sample

000034

QUANT REPORT

Page 1

Operator ID: LIN
 Output File: ^E4929:::QT
 Data File: >E4929:::D1
 Name: AA31049
 Misc: A,5ml,FB

Quant Rev: 7 Quant Time: 950614 19:17
 Injected at: 950614 18:52
 Dilution Factor: 1.00000
 Instrument ID: MSD_1

ID File: IDWU01:::D2
 Title: J&W DB-624 75M .53mm ID column
 Last Calibration: 950526 11:39

Last Qcal Time: 950614 14:08

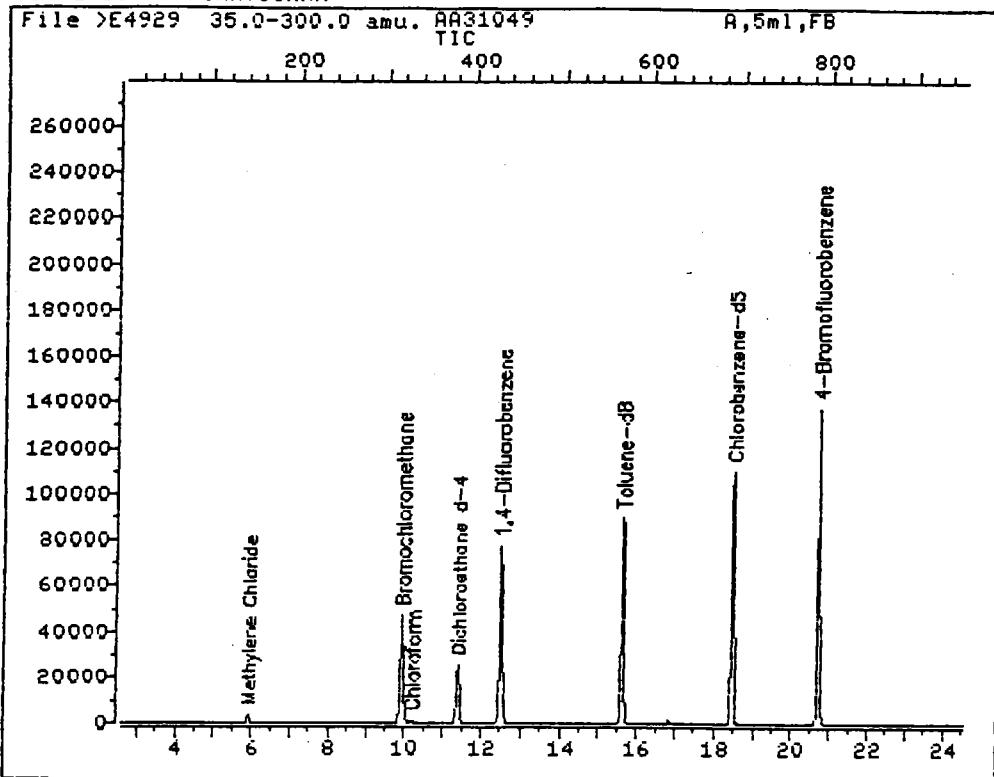
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.93	319	38898	50.00	ug/L	95
9)	Methylene Chloride	5.93	145	4054	3.86	ug/L	96
18)	Chloroform	10.21	331	2687	1.20	ug/L	98
19)	1,2-Dichloroethane-d4	11.40	383	11146	48.38	ug/L	96
28)	*1,4-Difluorobenzene	12.50	431	167039	50.00	ug/L	97
39)	*Chlorobenzene-d5	18.47	691	150075	50.00	ug/L	94
46)	Toluene d-8	15.63	567	157238	49.07	ug/L	97
53)	Bromofluorobenzene	20.73	789	122437	50.64	ug/L	99

* Compound is ISTD

000035

DB
6/19/

TOTAL ION CHROMATOGRAM



Data File: >E4929::D1
Name: AA31049
Misc: A,5ml,FB

Quant Output File: ^E4929::QT
Instrument ID: MSD_1

Id File: IDWU01::D2
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 950526 11:39
Operator ID: LIN
Quant Time : 950614 19:17
Injected at: 950614 18:52

Last Qcal Time: 950614 14:08

000030

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31044
Sample Matrix: SOIL
% Solids: 84

Date Received: 6/09/95
Date Extracted: 6/09/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	E1 soil	35	1	24	6/09/95

000037

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31045
Sample Matrix: SOIL
% Solids: 75

Date Received: 6/09/95
Date Extracted: 6/09/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	E2 soil	29	1	27	6/09/95

000023

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31046
Sample Matrix: SOIL
% Solids: 79

Date Received: 6/09/95
Date Extracted: 6/09/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	E3 soil	ND	1	25	6/09/95

000039

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31047
Sample Matrix: SOIL
% Solids: 89

Date Received: 6/09/95
Date Extracted: 6/09/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	E4 soil	5200	10	220	6/09/95

000040

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31048
Sample Matrix: SOIL
% Solids: 79

Date Received: 6/09/95
Date Extracted: 6/09/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	E5 soil	ND	1	25	6/09/95

000041

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT. # 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Dates Analyzed: 06/07/95 thru 06/08/95

LAB	S1	S2	S3	FILE	TOT
SAMP NO.	(\$)	(DCE) #	(TOL) #	(BFB) #	OUT
IDAILY BLK(W)	98	99	99	1^E4833	0
IDAILY BLK(S)	99	98	98	1^E4834	0
IAA30753	W	95	99	1^E4835	0
IAA30904	S	100	100	103	1^E4836
IAA30886	S	101	110	75	1^E4837
IAA30897	S	102	97	94	1^E4838
IAA30898	S	104	98	95	1^E4839
IAA30905	S	104	104	87	1^E4840
IAA30906	S	102	104	88	1^E4841
IAA30907	S	104	103	88	1^E4842
IAA30908	S	103	104	87	1^E4843
IAA30870MS	S	101	97	99	1^E4844
IAA30870MSD	S	103	95	99	1^E4845
ISMB-SPK	S	104	95	101	1^E4846
IWMP-SPK	W	100	95	100	1^E4847
IAA30843MS	W	99	98	100	1^E4848
IAA30843MSD	W	100	97	101	1^E4849

QC Limits For:

S1 (DCE) = 1,2-Dichloroethane-d4
 S2 (TOL) = Toluene d-8
 S3 (BFB) = Bromofluorobenzene

Soil	Water	Sur Conc(ug/L)
		Water Soil
70-121	76-114	50 50
81-117	88-110	50 50
74-121	86-115	50 50

\$ Column indicating Soil or Water matrix
 # Column to be used to flag recovery values
 * Values outside of method/lab limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT.# 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Dates Analyzed: 06/12/95 thru 06/13/95

LAB	S1	S2	S3	FILE	TOTI
SAMP NO. (\$)	(DCE)‡	(TOL)‡	(BFB)‡	IOUT	
1DAILY BLK(W)	94	103	100	I^E4879	0
1DAILY BLK(S)	102	99	100	I^E4880	0
IAA31047	W	95	100	I^E4891	0
IAA31052	S	0*	0*	I^E4882	3
IAA31047	S	102	104	I^E4883	0
IAA30957	S	101	97	I^E4894	0
IAA30958	S	102	92	I^E4895	0
IAA30960	S	101	87	I^E4886	0
IAA31052	S	100	102	I^E4887	0
IAA30962	W	96	98	I^E4888	0
IAA30946	W	97	96	I^E4889	0
IAA30947	W	98	98	I^E4890	0
IAA30950	S	102	122*	I^E4891	1
IAA30951	S	105	111	I^E4892	1
IAA30956	S	105	66*	I^E4893	2
IAA30843MS	W	97	100	I^E4894	0
IAA30843MSD	W	100	98	I^E4895	0
IWMB-SPK	W	102	98	I^E4896	0

QC Limits For:

S1 (DCE) = 1,2-Dichloroethane-d4
 S2 (TOL) = Toluene d-8
 S3 (BFB) = Bromofluorobenzene

Soil	Water	Sur Conc(ug/L)
	Water	Soil
70-121	76-114	50 50
81-117	88-110	50 50
74-121	86-115	50 50

* Column indicating Soil or Water matrix
 ‡ Column to be used to flag recovery values
 * Values outside of method/lab limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT.# 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Dates Analyzed: 06/14/95 thru 06/15/95

LAB	S1	S2	S3	FILE	TOT
SAMP NO. (\$)	(DCE) #	(TOL) #	(BFB) #	OUT	
IDAILY BLK(W	96	99	101	1^E4922	0
IDAILY BLK(S	100	100	98	1^E4923	0
IAA30968	S	97	102	1^E4924	0
IAA30974	S	100	105	1^E4925	0
IAA30970	W	97	99	1^E4926	0
IDAILY BLK(W	98	100	101	1^E4927	0
IAA30939	W	95	97	1^E4928	0
IAA31049	W	97	98	1^E4929	0
IAA30938	S	101	95	1^E4930	0
IAA31099	S	101	99	1^E4931	0
IAA31100	S	101	102	1^E4932	0
IAA30931	S	0*	0*	1^E4933	3

QC Limits For:

S1 (DCE) = 1,2-Dichloroethane-d4
 S2 (TOL) = Toluene d-8
 S3 (BFB) = Bromofluorobenzene

Soil	Water	Sur Conc(ug/L)	Water	Soil
70-121	76-114	50	50	
81-117	88-110	50	50	
74-121	86-115	50	50	

\$ Column indicating Soil or Water matrix
 # Column to be used to flag recovery values
 * Values outside of method/lab limits

FORM 3
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Matrix Spike - Lab sample No.: AA30870

Non spiked file: ^E4822 Spiked file: ^E4844 Spike dup file: ^E4845

Compound	Spike	Sample	MS	MSD	MS	MSD	QC Limits		
	Added	Conc	Conc	Conc	%	%	%		
	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	Rec#	Rec#	Rpd#	Rpd	Rec
1,1-Dichloroethene	50	0	62	56	124	112	10	22	59-172
1Trichloroethene	50	0	55	56	110	112	2	24	62-137
1Benzene	50	0	56	57	112	114	2	21	66-142
1Toluene	50	0	55	55	110	110	0	21	59-139
1Chlorobenzene	50	0	55	56	110	112	2	21	60-133

* Column to be used to flag recovery and RPD values with an asterisk.

* Values outside of QC limits.

RPD: 0 out of 5 outside limits

Spike Recovery: 0 of 10 outside of limits

Comments: _____

Page (1 of 1)

000045

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT. # 14622,

Lab file ID: >E4834

Lab Sample ID: DAILY BLK(S)

Date Analyzed: 06/07/95

Time Analyzed: 16:00

Matrix: Soil

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

LAB	LAB	DATE
FILE NO.	SAMPLE ID	ANALYZED
<hr/>		
>E4836	IAA30904	17:01
>E4837	IAA30886	17:39
>E4838	IAA30897	18:15
>E4839	IAA30898	18:52
>E4840	IAA30905	19:29
>E4841	IAA30906	20:06
>E4842	IAA30907	20:43
>E4843	IAA30908	21:19
>E4844	IAA30870MS	21:56
>E4845	IAA30870MSD	22:32
>E4846	ISMB-SPK	23:09

Comments: _____

000040

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT. # 14622,

Lab file ID: >E4880

Lab Sample ID: DAILY BLK(S)

Date Analyzed: 06/12/95

Time Analyzed: 16:35

Matrix: Soil

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

LAB	LAB	DATE
FILE NO.	SAMPLE ID	ANALYZED
<hr/>		
>E4882	IAA31052	17:38
>E4883	IAA31047	18:12
>E4884	IAA30957	18:48
>E4885	IAA30958	19:25
>E4886	IAA30960	20:01
>E4887	IAA31052	20:38
>E4891	IAA30950	23:03
>E4892	IAA30951	23:39
>E4893	IAA30956	00:16

Comments: _____

000047

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622,

Lab file ID: >E4927

Lab Sample ID: DAILY BLK(A

Date Analyzed: 06/14/95

Time Analyzed: 17:54

Matrix: Water

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

LAB	LAB	DATE
FILE NO.	SAMPLE ID	ANALYZED
<hr/>		
>E4928	IAA30939	18:23
>E4929	IAA31049	18:52

Comments: _____

000048

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH

Contract: -----

Lab File ID: >E4700

BFB Injection date: 5/25/95

Instrument ID: MSD_1

BFB Injection time: 18:20

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	21.6
75	30-60% of mass 95	45.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.5
123	Less than 2.0% of mass 174	0.0(0.0)11
124	Greater than 50.0% of mass 95	74.0
125	5.0 - 9.0% of mass 174	5.3(7.2)11
126	Greater than 95.0%, but less than 101.0% of mass 174	74.2(100.3)11
127	5.0 - 9.0% of mass 176	5.1(6.8)21

1 - Value is % mass 174

2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

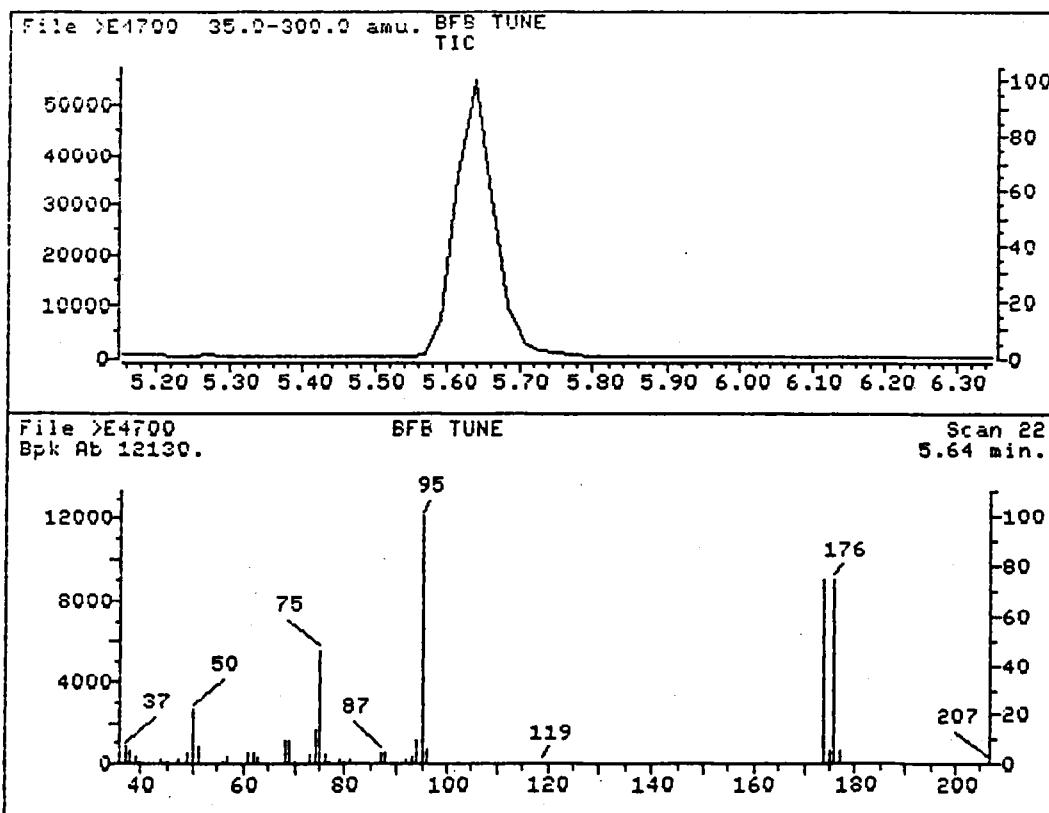
m/z	Ion Abundance Criteria	% Relative Abundance		Status
		Base Peak	Appropriate Peak	
50	15-40% of mass 95	21.63	21.63	Ok
75	30-60% of mass 95	45.66	45.66	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.51	6.51	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	73.99	73.99	Ok
175	5-9% of mass 174	5.33	7.21	Ok
176	95-101% of mass 174	74.18	100.26	Ok
177	5-9% of mass 176	5.06	6.82	Ok

Injection Date: 05/25/95

Injection Time: 18:20

Data File: >E4700

Scan: 22



000050

DB
5/19/95

>E4700
22

BFB TUNE

File: >E4700 Scan #: 22 Retn. time: 5.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	153.0	50.05	2624.0	69.05	1171.0	79.95	86.0	95.05	12130.0
37.10	794.0	51.05	858.0	70.05	91.0	80.95	247.0	96.05	790.0
38.00	624.0	55.95	155.0	73.05	453.0	81.95	74.0	118.95	65.0
39.10	283.0	56.95	282.0	74.05	1670.0	86.95	566.0	174.00	8975.0
40.00	134.0	61.05	490.0	75.05	5538.0	88.05	559.0	175.00	647.0
44.00	194.0	62.05	507.0	76.05	455.0	92.05	277.0	176.00	8998.0
45.10	128.0	63.05	341.0	77.05	107.0	93.05	363.0	177.00	614.0
47.00	227.0	68.05	1116.0	78.95	239.0	94.05	1114.0	207.00	75.0
48.95	524.0								

000051

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH

Contract: -----

Lab File ID: >E4830

BFB Injection date: 6/07/95

Instrument ID: MSD_1

BFB Injection time: 13:52

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	21.0
75	30-60% of mass 95	45.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	.5(.7)1
174	Greater than 50.0% of mass 95	73.2
175	5.0 - 9.0% of mass 174	5.0(6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.5(97.7)1
177	5.0 - 9.0% of mass 176	4.5(6.3)21

1 - Value is % mass 174

2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

EPA	LAB	LAB	DATE	TIME
SAMPLE NO	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
1	IDAILY CAL(A)	>E4831	6/07/95	14:22
2	IDAILY CAL(S)	>E4832	6/07/95	14:53
3	IDAILY BLK(A)	>E4833	6/07/95	15:30
4	IDAILY BLK(S)	>E4834	6/07/95	16:00
5	IAA30753	>E4835	6/07/95	16:30
6	IAA30904	>E4836	6/07/95	17:01
7	IAA30886	>E4837	6/07/95	17:39
8	IAA30897	>E4838	6/07/95	18:15
9	IAA30898	>E4839	6/07/95	18:52
10	IAA30905	>E4840	6/07/95	19:29
11	IAA30906	>E4841	6/07/95	20:06
12	IAA30907	>E4842	6/07/95	20:43
13	IAA30908	>E4843	6/07/95	21:19
14	IAA30870MS	>E4844	6/07/95	21:56
15	IAA30870MSD	>E4845	6/07/95	22:32
16	ISMB-SPK	>E4846	6/07/95	23:09
17	IWMB-SPK	>E4847	6/07/95	23:45
18	IAA30843MS	>E4848	6/08/95	0:22
19	IAA30843MSD	>E4849	6/08/95	0:58

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

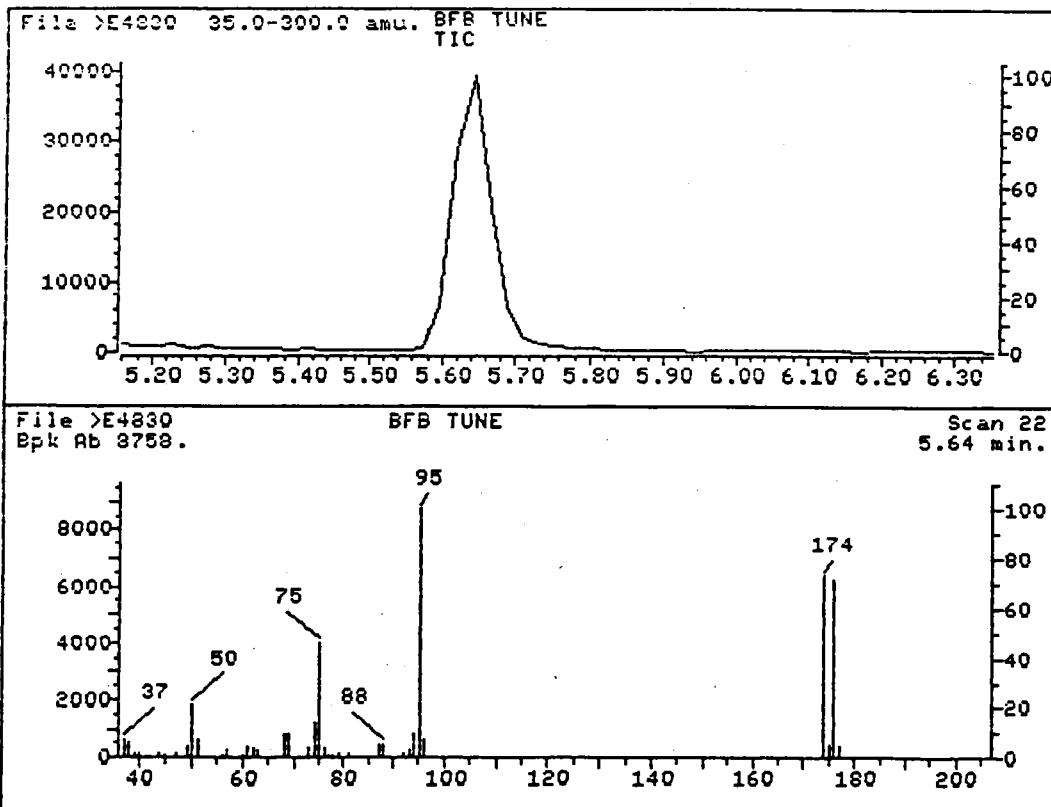
m/z	Ion Abundance Criteria	% Relative Abundance		Status
		Base Peak	Appropriate Peak	
50	15-40% of mass 95	21.03	21.03	Ok
75	30-60% of mass 95	45.91	45.91	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.03	7.03	Ok
173	Less than 2% of mass 174	.54	.73	Ok
174	Greater than 50% of mass 95	73.16	73.16	Ok
175	5-9% of mass 174	5.02	6.87	Ok
176	95-101% of mass 174	71.47	97.69	Ok
177	5-9% of mass 176	4.48	6.26	Ok

Injection Date: 06/07/95

Injection Time: 13:52

Data File: >E4830

Scan: 22



000053

DB
6/13/95

>E4830
22

BFB TUNE

File: >E4830 Scan #: 22 Retn. time: 5.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	99.00	49.05	392.00	63.05	235.00	78.05	99.00	95.05	8758.00
37.10	624.00	50.05	1842.00	68.05	805.00	78.95	187.00	96.05	616.00
38.10	501.00	51.05	605.00	69.05	791.00	80.95	169.00	173.00	47.00
39.10	197.00	56.05	125.00	73.05	335.00	87.05	439.00	174.00	6407.00
40.00	131.00	57.05	219.00	74.05	1185.00	88.05	465.00	175.00	440.00
44.00	170.00	59.95	81.00	75.05	4021.00	92.05	198.00	176.00	6259.00
45.00	117.00	61.05	367.00	76.05	320.00	93.05	254.00	177.00	392.00
47.10	170.00	62.05	319.00	76.95	101.00	94.05	820.00	207.10	79.00

000054

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERITECH

Contract: -----

Lab File ID: >E4876

BFB Injection date: 6/12/95

Instrument ID: MSD_1

BFB Injection time: 14:31

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	19.4
75	30-60% of mass 95	44.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	80.0
175	5.0 - 9.0% of mass 174	5.9(7.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.8(98.5)1
177	5.0 - 9.0% of mass 176	5.2(6.6)2

1 - Value is % mass 174

2 - Value is % mass 176

THIS LINE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

EPA	LAB	LAB	DATE	TIME
SAMPLE NO	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
1	IDAILY CAL(A)	>E4877	6/12/95	15:01
2	IDAILY CAL(S)	>E4878	6/12/95	15:31
3	IDAILY BLK(ME)	>E4879	6/12/95	16:06
4	IDAILY BLK(S)	>E4880	6/12/95	16:35
5	IAA31047	>E4881	6/12/95	17:05
6	IAA31052	>E4882	6/12/95	17:38
7	IAA31047	>E4883	6/12/95	18:12
8	IAA30957	>E4884	6/12/95	18:48
9	IAA30958	>E4885	6/12/95	19:25
10	IAA30960	>E4886	6/12/95	20:01
11	IAA31052	>E4887	6/12/95	20:38
12	IAA30962	>E4888	6/12/95	21:14
13	IAA30946	>E4889	6/12/95	21:50
14	IAA30947	>E4890	6/12/95	22:27
15	IAA30950	>E4891	6/12/95	23:03
16	IAA30951	>E4892	6/12/95	23:39
17	IAA30956	>E4893	6/13/95	0:16
18	IAA30843MS	>E4894	6/13/95	0:52
19	IAA30843MSD	>E4895	6/13/95	1:28
20	IWMB-SPK	>E4896	6/13/95	2:04

>E4876
23

BFB TUNE

File: >E4876 Scan #: 23 Retn. time: 5.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	390.00	51.05	687.00	69.05	668.00	80.95	130.00	96.05	401.00
38.10	325.00	56.05	98.00	73.05	279.00	87.05	324.00	131.05	66.00
39.10	168.00	57.05	230.00	74.05	822.00	88.05	352.00	174.00	5085.00
44.00	156.00	61.05	255.00	75.05	2834.00	92.05	130.00	175.00	374.00
47.00	117.00	62.05	247.00	76.05	213.00	93.05	215.00	176.00	5009.00
49.05	280.00	63.05	173.00	77.05	102.00	94.05	634.00	177.00	332.00
50.05	1233.00	68.05	622.00	78.95	132.00	95.05	6355.00		

000057

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name : VERI TECH

Contract: -----

Lab File ID: >E4919

BFB Injection date: 6/14/95

Instrument ID: MSD_1

BFB Injection time: 13:39

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	19.6
75	30-60% of mass 95	45.5
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	75.8
175	5.0 - 9.0% of mass 174	5.3(6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.9(98.9)1
177	5.0 - 9.0% of mass 176	4.7(6.3)2

1 - Value is % mass 174

2 - Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

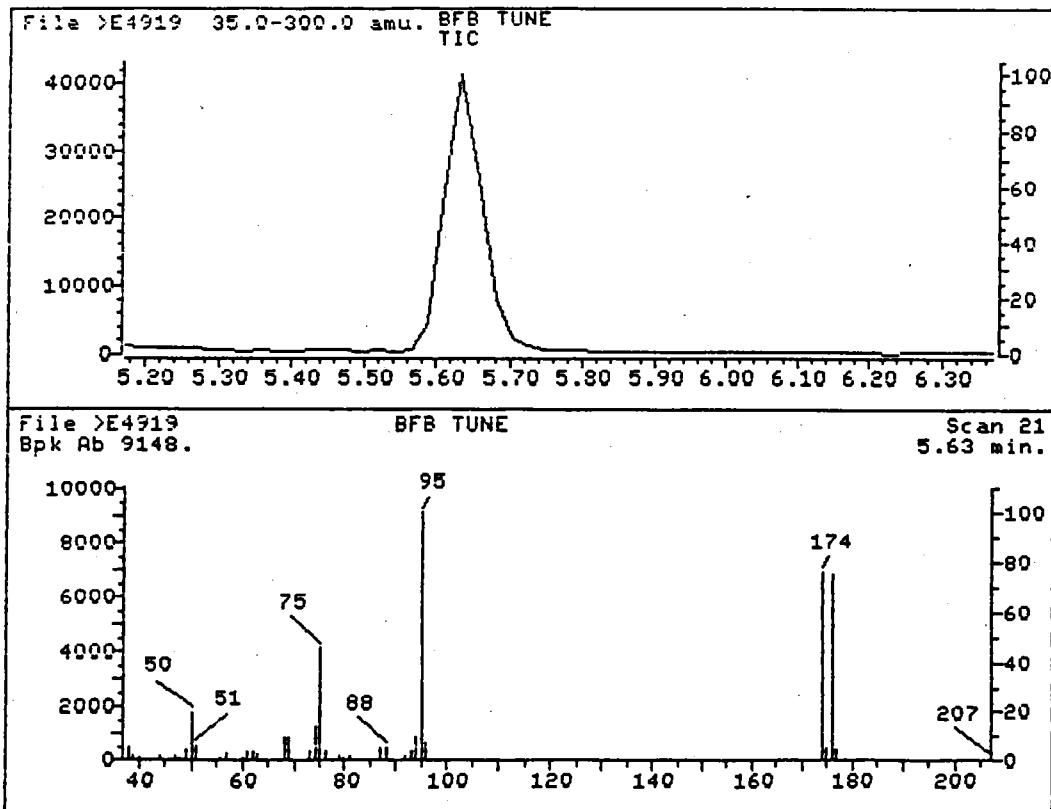
m/z	Ion Abundance Criteria	% Relative Abundance		Status
		Base Peak	Appropriate Peak	
50	15-40% of mass 95	19.58	19.58	Ok
75	30-60% of mass 95	45.53	45.53	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.81	6.81	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	75.80	75.80	Ok
175	5-9% of mass 174	5.26	6.94	Ok
176	95-101% of mass 174	74.95	98.88	Ok
177	5-9% of mass 176	4.74	6.33	Ok

Injection Date: 06/14/95

Injection Time: 13:39

Data File: >E4919

Scan: 21



000059

DB
6/14

>E4919
21

BFB TUNE

File: >E4919 Scan #: 21 Retn. time: 5.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	616.00	50.05	1791.00	68.05	857.00	79.95	92.00	95.05	9148.00
38.10	500.00	51.05	583.00	69.05	897.00	80.95	181.00	96.05	623.00
39.10	204.00	55.95	133.00	73.05	343.00	87.05	463.00	174.00	6934.00
40.00	99.00	57.05	272.00	74.05	1228.00	88.05	482.00	175.00	481.00
44.00	177.00	60.05	85.00	75.05	4165.00	92.05	193.00	176.00	6856.00
47.10	175.00	61.05	361.00	76.05	345.00	93.05	301.00	177.00	434.00
47.90	67.00	62.05	332.00	78.95	188.00	94.05	829.00	207.10	66.00
49.05	378.00	63.05	247.00						

000060

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR WATER

Instrument ID: MSD_1
Calibration Date: 05/25/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

Laboratory ID: >E4701 >E4702 >E4703 >E4704 >E4705

Compound	RF 10.0	RF 20.0	RF 50.0	RF 100.0	RF 200.0	\$RT	\$RF	\$RSD	*/**	Optional Cal Curve
Chloromethane	1.281	1.165	1.159	1.024	1.039	3.033	1.133	9.280	**	
Bromomethane	.5744	.6826	.6846	.6757	.6999	3.653	.6634	7.620		
Vinyl Chloride	1.222	1.165	1.163	1.076	1.085	3.152	1.142	5.364	*	
Chloroethane	.3758	.4162	.4393	.4189	.4386	3.644	.4178	6.172		
Trichlorofluoromethane	1.550	1.767	1.823	1.708	1.804	4.057	1.730	6.364		
t-Butyl Alcohol	.0367	.0328	.0361	.0354	.0346	6.364	.0351	4.357		(50.0,100.,250.,500.,1000)
Methyl-t-butyl ether	1.581	1.528	1.531	1.496	1.514	6.658	1.530	2.073		
Methylene Chloride	1.715	1.371	1.291	1.187	1.059	5.918	1.324	18.689		
Acrolein	--	--	--	--	--					
Acrylonitrile	.0968	.1128	.1331	.1404	.1438	6.483	.1254	15.938		
Acetone	.1191	.1185	.1006	.0982	.1046	5.096	.1082	9.201		
Carbon Disulfide	3.048	3.165	3.155	3.033	3.310	5.367	3.142	3.551		
1,1-Dichloroethene	.8820	.9376	.8876	.8561	.8976	4.953	.8922	3.323	*	
Di-isopropyl-ether	3.782	3.955	3.959	3.915	4.006	7.995	3.923	2.179		
1,1-Dichloroethane	2.301	2.379	2.387	2.355	2.365	7.623	2.357	1.434	**	
Trans-1,2-Dichloroethene	1.336	1.233	1.352	1.291	1.272	6.548	1.297	3.723		
Chloroform	2.637	2.730	2.750	2.705	2.699	10.19	2.704	1.580	*	
1,2-Dichloroethane-d4	.2879	.2716	.2676	.2744	.2758	11.39	.2755	2.768		(50.0,50.0,50.0,50.0,50.0)
1,2-Dichloroethane	1.271	1.352	1.351	1.311	1.341	11.57	1.325	2.607		
2-Butanone	.1944	.2160	.2089	.2412	.2317	9.414	.2185	8.459		
1,1,1-Trichloroethane	2.170	2.232	2.285	2.247	2.256	10.63	2.238	1.911		
Carbon Tetrachloride	2.221	2.370	2.403	2.364	2.383	11.05	2.348	3.086		
Vinyl Acetate	3.018	2.980	3.009	3.003	3.077	7.898	3.017	1.197		
Bromodichloromethane	2.700	2.880	2.895	2.877	2.957	14.15	2.862	3.350		
1,2-Dichloropropane	.3866	.4105	.3996	.3921	.3962	13.53	.3970	2.263	*	
Trans-1,3-Dichloropropene	.3621	.3879	.3933	.3931	.4108	16.22	.3894	4.505		
Trichloroethene	.4845	.5011	.4859	.4736	.4649	13.05	.4820	2.842		
Dibromochloromethane	.4660	.5063	.4893	.4743	.4833	17.33	.4838	3.177		
1,1,2-Trichloroethane	.2851	.2897	.2760	.2668	.2700	16.56	.2775	3.520		
Benzene	.8670	.8744	.8648	.8490	.8356	11.53	.8582	1.825		
cis-1,3-Dichloropropene	.4762	.5196	.5155	.5211	.5295	15.09	.5124	4.067		
2-Chloroethylvinylether	.1055	.1172	.1290	.1355	.1440	14.84	.1262	12.012		
Bromoform	.5066	.5377	.5094	.4867	.4965	20.07	.5074	3.775	**	
2-Hexanone	.0982	.1187	.1236	.1291	.1397	17.12	.1219	12.596		
4-Methyl-2-Pentanone	.1884	.1964	.1979	.1984	.2129	15.46	.1988	4.459		
Tetrachloroethene	.5935	.5913	.5689	.5509	.5345	16.86	.5678	4.496		
1,1,2,2-Tetrachloroethane	.5637	.5460	.5224	.5056	.5162	20.99	.5308	4.451	**	
Toluene	.6698	.6717	.6594	.6497	.6458	15.76	.6593	1.761	*	
Toluene d-8	1.056	1.056	1.073	1.095	1.106	15.64	1.077	2.107		(50.0,50.0,50.0,50.0,50.0)
Chlorobenzene	.9761	.9812	.9596	.9414	.9451	18.51	.9607	1.858	**	

* - Indicates CCC Compound

** - Indicates SPCC Compound

\$RT - Avg Retention Times

Units in ug/L

\$RF - Avg Response Factor

\$RSD- Relative Standard Deviation

Initial Calibration Data

Lab: Veritech Instrument ID: MSD_1
 Cal Type: CAL FOR WATER Calibration Date: 05/25/95

Minimum Avg RF for SPCC is: .300 Maximum %RSD for CCC is: 30

Laboratory ID: >E4701 >E4702 >E4703 >E4704 >E4705

Compound	RF 10.0	RF 20.0	RF 50.0	RF 100.0	RF 200.0	\$RT	\$RF	\$RSD	*/**	Optional Cal Curve
Ethylbenzene	1.370	1.414	1.417	1.401	1.409	18.76	1.402	1.331	*	
Styrene	.8162	.8397	.8394	.8024	.7723	19.76	.8140	3.466		
m&p-Xylenes	.5043	.5103	.4969	.4736	.4480	18.99	.4866	5.274	(20.0,40.0,100.,200.,400.)	
o-Xylene	1.143	1.172	1.157	1.108	1.067	19.73	1.129	3.718		
BromoFluorobenzene	.7973	.7942	.8150	.8129	.8329	20.72	.8105	1.918	(50.0,50.0,50.0,50.0,50.0)	
1,3-Dichlorobenzene	1.025	1.025	1.039	.9711	.9385	22.77	.9998	4.303		
1,4-Dichlorobenzene	1.094	1.080	1.068	1.018	.9776	22.95	1.047	4.623		
1,2-Dichlorobenzene	.9397	.9246	.9303	.8788	.8628	23.64	.9072	3.768		

* - Indicates CCC Compound
 \$RT - Avg Retention Times

** - Indicates SPCC Compound
 \$RF - Avg Response Factor

Units in ug/L
 \$RSD- Relative Standard Deviation

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Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR SOIL

Instrument ID: MSD_1
Calibration Date: 05/25/95

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

Laboratory ID: >E4706 >E4707 >E4708 >E4709 >E4710

Compound	RF 10.0	RF 20.0	RF 50.0	RF 100.0	RF 200.0	\$RT	\$RF	\$RSD	*/**	Optional Cal Curve
----------	------------	------------	------------	-------------	-------------	------	------	-------	------	--------------------

Chloromethane	.9272	.9294	.9506	.8330	.8063	3.042	.8893	7.301	**	
Bromomethane	.2641	.2798	.2947	.2872	.2766	3.539	.2805	4.114		
Vinyl Chloride	.9084	.9508	.9945	.8930	.8673	3.148	.9228	5.445	*	
Chloroethane	.0886	.1325	.1463	.1507	.1350	3.626	.1306	18.915		
Trichlorofluoromethane	.8193	1.011	1.004	.9967	.9586	3.993	.9579	8.364		
t-Butyl Alcohol	.1353	.1298	.1290	.1254	.1392	6.451	.1318	4.147	(50.0,100.,250.,500.,1000)	
Methyl-t-butyl ether	2.008	1.955	1.949	1.897	1.966	6.658	1.955	2.032		
Methylene Chloride	1.572	1.204	1.033	1.046	1.009	5.900	1.173	20.105		
Acrolein	--	--	--	--	--					
Acrylonitrile	.2278	.2352	.2577	.2475	.2668	6.488	.2470	6.446		
Acetone	.2690	.2221	.2266	.1956	.2024	5.119	.2231	12.892		
Carbon Disulfide	2.271	2.296	2.525	2.443	2.382	5.326	2.383	4.404		
1,1-Dichloroethene	.6286	.6565	.7050	.6630	.6442	4.912	.6594	4.343	*	
Di-isopropyl-ether	3.762	3.691	3.802	3.751	3.853	8.004	3.772	1.596		
1,1-Dichloroethane	1.978	2.014	2.051	2.025	2.011	7.600	2.016	1.306	**	
Trans-1,2-Dichloroethene	1.092	1.106	1.096	1.099	1.051	6.520	1.089	1.994		
Chloform	2.362	2.395	2.392	2.359	2.336	10.19	2.369	1.034	*	
1,2-Dichloroethane-d4	.2864	.2853	.2889	.2903	.2893	11.39	.2880	.721	(50.0,50.0,50.0,50.0,50.0)	
1,2-Dichloroethane	1.432	1.405	1.421	1.366	1.373	11.57	1.399	2.096		
2-Butanone	.5043	.5011	.5376	.4974	.5436	9.424	.5168	4.248		
1,1,1-Trichloroethane	1.806	1.878	1.925	1.893	1.869	10.61	1.874	2.339		
Carbon Tetrachloride	1.907	1.957	2.017	1.982	1.952	11.04	1.963	2.060		
Vinyl Acetate	2.919	2.982	3.060	2.600	2.704	7.949	2.853	6.787		
Bromodichloromethane	2.696	2.631	2.736	2.696	2.707	14.14	2.693	1.431		
1,2-Dichloropropane	.4370	.4216	.4292	.4154	.4271	13.53	.4261	1.909	*	
Trans-1,3-Dichloropropene	.4875	.4625	.4996	.4869	.5146	16.22	.4902	3.913		
Trichloroethene	.4926	.4951	.5006	.4750	.4781	13.04	.4983	2.286		
Dibromochloromethane	.6577	.6063	.6315	.5979	.6102	17.33	.6207	3.879		
1,1,2-Trichloroethane	.4209	.3779	.3881	.3634	.3736	16.56	.3848	5.730		
Benzene	.8431	.8665	.8680	.8392	.8488	11.53	.8531	1.565		
cis-1,3-Dichloropropene	.5706	.5543	.5848	.5671	.5965	15.09	.5747	2.841		
2-Chloroethylvinylether	.1993	.1994	.2337	.2294	.2535	14.84	.2231	10.538		
Bromoform	.8285	.7377	.7780	.7401	.7645	20.08	.7698	4.799	**	
2-Hexanone	.3395	.3370	.3618	.3505	.3977	17.13	.3573	6.887		
4-Methyl-2-Pentanone	.5067	.4827	.5056	.4897	.5572	15.46	.5084	5.734		
Tetrachloroethene	.5467	.5522	.5502	.5196	.5113	16.86	.5360	3.557		
1,1,2,2-Tetrachloroethane	1.010	.8874	.9086	.8657	.9098	21.00	.9163	6.038	**	
Toluene	.6373	.6461	.6500	.6286	.6323	15.76	.6389	1.416	*	
Toluene d-8	1.030	1.045	1.065	1.069	1.085	15.62	1.059	2.003	(50.0,50.0,50.0,50.0,50.0)	
Chlorobenzene	1.009	.9611	.9642	.9434	.9517	18.51	.9658	2.623	**	

* - Indicates CCC Compound

-SRT - Avg Retention Times

** - Indicates SPCC Compound

\$RF - Avg Response Factor

Units in ug/L

\$RSD- Relative Standard Deviation

Initial Calibration Data

Lab: Veritech Instrument ID: MSD_1
 Cal Type: CAL FOR SOIL Calibration Date: 05/25/95

Minimum Avg RF for SPCC is: .300 Maximum %RSD for CCC is: 30

Laboratory ID: >E4706 >E4707 >E4708 >E4709 >E4710

Compound	RF 10.0	RF 20.0	RF 50.0	RF 100.0	RF 200.0	\$RT	\$RF	\$RSD	*/**	Optional Cal Curve
Ethylbenzene	1.366	1.365	1.384	1.366	1.378	18.76	1.372	.632	*	
Styrene	.8776	.8338	.8384	.8206	.7880	19.75	.8317	3.891		
m&p-Xylenes	.4880	.4845	.4808	.4566	.4325	18.99	.4485	5.033	(20.0,40.0,100.,200.,400.)	
<i>o</i> -Xylene	1.184	1.132	1.133	1.091	1.057	19.73	1.119	4.272		
Bromofluorobenzene	.8225	.8173	.8226	.8407	.8360	20.72	.8278	1.205	(50.0,50.0,50.0,50.0,50.0)	
1,3-Dichlorobenzene	1.130	1.025	1.014	.9921	.9798	22.77	1.028	5.816		
1,4-Dichlorobenzene	1.207	1.088	1.092	1.045	1.029	22.95	1.092	6.382		
1,2-Dichlorobenzene	1.126	.9974	.9879	.9584	.9599	23.64	1.006	6.897		

* - Indicates CCC Compound
 \$RT - Avg Retention Times

** - Indicates SPCC Compound
 \$RF - Avg Response Factor

Units in ug/L
 \$RSD- Relative Standard Deviation

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000064

Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FOR SOIL Calibration Date: 06/07/95
 File name: ^E4832 Injection Time : 1453

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Chloromethane	.8893	.8754	3.060	1.56	**
Bromomethane	.2805	.2565	3.519	8.54	
Vinyl Chloride	.9228	1.015	3.175	9.96	*
Chloroethane	.1306	.1479	3.864	13.20	
Trichlorofluoromethane	.9579	1.022	4.002	6.70	
t-Butyl Alcohol	.1318	.1475	6.436	11.94	(Conc=250)
Methyl-t-butyl ether	1.955	2.061	6.666	5.43	
Methylene Chloride	1.173	.9296	5.885	20.74	
Acrolein	--	--	--	--	
Acrylonitrile	.2420	.2590	6.482	4.86	
Acetone	.2231	.2014	5.104	9.73	
Carbon Disulfide	2.383	2.482	5.334	4.13	
1,1-Dichloroethene	.6594	.6327	4.920	4.05	*
Di-isopropyl-ether	3.772	4.358	7.999	15.54	
1,1-Dichloroethane	2.016	2.007	7.608	.46	**
Trans-1,2-Dichloroethene	1.089	1.087	6.528	.18	
Chloroform	2.369	2.250	10.18	5.03	*
1,2-Dichloroethane-d4	.2880	.3024	11.40	4.98	
1,2-Dichloroethane	1.399	1.342	11.58	4.11	
2-Butanone	.5148	.5463	9.423	5.70	
1,1,1-Trichloroethane	1.874	1.766	10.62	5.78	
Carbon Tetrachloride	1.963	1.776	11.03	9.53	
Vinyl Acetate	2.853	3.746	7.861	31.29	
Bromodichloromethane	2.693	2.513	14.13	6.70	
1,2-Dichloropropane	.4261	.4067	13.51	4.55	*
Trans-1,3-Dichloropropene	.4902	.4528	16.22	7.63	
Trichloroethene	.4883	.4542	13.05	6.97	
Dibromochloromethane	.6207	.5527	17.33	10.95	
1,1,2-Trichloroethane	.3848	.3437	16.57	10.69	
Benzene	.8531	.8195	11.54	3.93	
cis-1,3-Dichloropropene	.5747	.5475	15.10	4.72	
2-Chloroethylvinylether	.2231	.2203	14.82	1.26	
Bromoform	.7698	.7069	20.08	8.17	**
2-Hexanone	.3573	.3310	17.12	7.35	
4-Methyl-2-Pentanone	.5084	.4777	15.44	6.03	
Tetrachloroethene	.5360	.4871	16.87	9.13	
1,1,2,2-Tetrachloroethane	.9163	.7636	21.00	16.66	**
Toluene	.6389	.5842	15.76	8.55	*
Toluene d-8	1.059	1.054	15.63	.43	
Chlorobenzene	.9658	.8576	18.52	11.20	**

* - Indicates CCC compound

PT - Cont Cal Retention Times

-\$DIFF- %Difference from average RF

** - Indicates SPCC compound

RF - Response Factor from daily cal @ 50.00 ug/L

\$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FOR SOIL Calibration Date: 06/07/95
 File name: ^E4832 Injection Time : 1453

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Ethylbenzene	1.372	1.229	18.75	10.38	*
Styrene	.8317	.7790	19.76	6.33	
m,p-Xylenes	.4685	.4393	19.00	6.22	(Conc=100)
<i>o</i> -Xylene	1.119	1.004	19.74	10.32	
Bromofluorobenzene	.8278	.8557	20.73	3.37	
1,3-Dichlorobenzene	1.028	.9254	22.77	10.01	
1,4-Dichlorobenzene	1.092	.9929	22.96	9.08	
1,2-Dichlorobenzene	1.006	.8948	23.64	11.03	

* - Indicates CCC compound ** - Indicates SPCC compound

RT - Cont Cal Retention Times RF - Response Factor from daily cal @ 50.00 ug/L

\$DIFF- %Difference from average RF \$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

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Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FOR SOIL Calibration Date: 06/12/95
 File name: ^E4878 Injection Time : 1531

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Chloromethane	.8893	.6577	3.081	26.04	**
Bromomethane	.2805	.2109	3.541	24.80	
Vinyl Chloride	.9228	.7898	3.173	14.41	*
Chloroethane	.1306	.1293	3.633	1.01	
Trichlorofluoromethane	.9579	1.003	4.000	4.73	
t-Butyl Alcohol	.1318	.1341	6.435	1.81	(Conc=250)
Methyl-t-butyl ether	1.955	2.090	6.665	6.92	
Methylene Chloride	1.173	.9339	5.907	20.38	
Acrolein	--	--	--	--	
Acrylonitrile	.2470	.2678	6.481	8.43	
Acetone	.2231	.2249	5.126	.77	
Carbon Disulfide	2.383	2.423	5.332	1.68	
1,1-Dichloroethene	.6594	.6627	4.919	.50	*
Di-isopropyl-ether	3.772	4.384	8.020	16.23	
1,1-Dichloroethane	2.016	2.214	7.607	9.84	**
Trans-1,2-Dichloroethene	1.089	1.147	6.527	5.35	
Chloroform	2.369	2.467	10.18	4.16	*
1,2-Dichloroethane-d4	.2880	.2995	11.37	3.96	
1,2-Dichloroethane	1.399	1.428	11.58	2.04	
2-Butanone	.5168	.5670	9.421	9.72	
1,1,1-Trichloroethane	1.874	1.982	10.62	5.74	
Carbon Tetrachloride	1.963	2.002	11.03	1.99	
Vinyl Acetate	2.853	4.057	7.859	42.21	
Bromodichloromethane	2.693	2.786	14.13	3.45	
1,2-Dichloropropane	.4261	.4491	13.51	5.41	*
Trans-1,3-Dichloropropene	.4902	.4994	16.22	1.87	
Trichloroethene	.4883	.4825	13.05	1.18	
Dibromochloromethane	.6207	.6082	17.32	2.02	
1,1,2-Trichloroethane	.3848	.3737	16.57	2.88	
Benzene	.8531	.8836	11.54	3.57	
cis-1,3-Dichloropropene	.5747	.6002	15.10	4.44	
2-Chloroethylvinylether	.2231	.2476	14.82	11.00	
Bromoform	.7698	.7841	20.08	1.86	**
2-Hexanone	.3573	.3702	17.12	3.62	
4-Methyl-2-Pentanone	.5084	.5327	15.44	4.78	
Tetrachloroethene	.5360	.5376	16.87	.31	
1,1,2,2-Tetrachloroethane	.9163	.8694	21.00	5.12	**
Toluene	.6389	.6507	15.76	1.85	*
Toluene d-8	1.059	1.061	15.62	.20	
Chlorobenzene	.9658	.9478	18.52	1.87	**

* - Indicates CCC compound

** - Indicates SPCC compound

RT - Cont Cal Retention Times

RF - Response Factor from daily cal @ 50.00 ug/L

\$D!FF- %difference from average RF

\$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FDR SOIL Calibration Date: 06/12/95
 File name: ^E4878 Injection Time : 1531

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Ethylbenzene	1.372	1.392	18.75	.75	*
Styrene	.8317	.8674	19.76	4.30	
m&p-Xylenes	.4685	.4843	18.98	3.37	(Conc=100)
o-Xylene	1.119	1.133	19.74	1.19	
Bromofluorobenzene	.8278	.8498	20.73	2.66	
1,3-Dichlorobenzene	1.028	1.014	22.77	1.37	
1,4-Dichlorobenzene	1.092	1.078	22.95	1.25	
1,2-Dichlorobenzene	1.006	.9865	23.64	1.90	

* - Indicates CCC compound

** - Indicates SPCC compound

RT - Cont Cal Retention Times

RF - Response Factor from daily cal @ 50.00 ug/L

\$DIFF- %Difference from average RF

\$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

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Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FOR WATER Calibration Date: 06/14/95
 File name: ^E4920 Injection Time : 1408

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Chloromethane	1.133	.7988	3.064	29.53	**
Bromomethane	.6634	.5506	3.661	17.00	
Vinyl Chloride	1.142	.9915	3.156	13.19	*
Chloroethane	.4178	.4232	3.638	1.30	
Trichlorofluoromethane	1.730	1.653	4.052	4.45	
t-Butyl Alcohol	.0351	.0412	6.349	17.19	(Conc=250)
Methyl-t-butyl ether	1.530	1.682	6.648	9.98	
Methylene Chloride	1.324	1.351	5.913	1.97	
Acrolein	--	--	--	--	
Acrylonitrile	.1254	.1541	6.487	22.98	
Acetone	.1082	.1113	5.086	2.89	
Carbon Disulfide	3.142	3.021	5.361	3.85	
1,1-Dichloroethene	.8922	.8931	4.948	.10	*
Di-isopropyl-ether	3.923	4.650	7.980	18.51	
1,1-Dichloroethane	2.357	2.611	7.613	10.74	**
Trans-1,2-Dichloroethene	1.297	1.434	6.556	10.61	
Chloroform	2.704	2.873	10.19	6.24	*
1,2-Dichloroethane-d4	.2755	.2962	11.38	7.51	
1,2-Dichloroethane	1.325	1.381	11.56	4.25	
2-Butanone	.2185	.2370	9.405	8.49	
1,1,1-Trichloroethane	2.238	2.356	10.62	5.27	
Carbon Tetrachloride	2.348	2.375	11.06	1.15	
Vinyl Acetate	--	--	--	--	
Bromodichloromethane	2.862	3.027	14.14	5.76	
1,2-Dichloropropane	.3970	.4231	13.52	6.56	*
Trans-1,3-Dichloropropene	.3894	.3846	16.23	1.24	
Trichloroethene	.4820	.4921	13.06	2.09	
Dibromochloromethane	.4838	.4727	17.33	2.30	
1,1,2-Trichloroethane	.2775	.2723	16.57	1.88	
Benzene	.8582	.8932	11.54	4.08	
cis-1,3-Dichloropropene	.5124	.5309	15.08	3.62	
2-Chloroethylvinylether	.1262	.1488	14.83	17.83	
Bromoform	.5074	.4944	20.07	2.56	**
2-Hexanone	.1219	.1216	17.12	.19	
4-Methyl-2-Pentanone	.1988	.2039	15.45	2.57	
Tetrachloroethene	.5678	.5670	16.85	.14	
1,1,2,2-Tetrachloroethane	.5308	.4849	20.98	8.64	**
Toluene	.6593	.6666	15.77	1.12	*
Toluene d-8	1.077	1.067	15.63	.91	
Chlorobenzene	.9607	.9534	18.50	.75	**

* - Indicates CCC compound

** - Indicates SPCC compound

RT - Cont Cal Retention Times

RF - Response Factor from daily cal @ 50.00 ug/L

\$DIFF- %Difference from average RF

\$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech Instrument ID : MSD_1
 Cal Type : CAL FOR WATER Calibration Date: 06/14/95
 File name: ^E4920 Injection Time : 1408

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	\$RF	RF	RT	\$DIF	*/**
Ethylbenzene	1.402	1.413	18.76	.76	*
Styrene	.8140	.8415	19.77	3.38	
m&p-Xylenes	.4866	.5004	18.99	2.83	(Conc=100)
o-Xylene	1.129	1.139	19.74	.86	
Bromofluorobenzene	.8105	.8055	20.71	.62	
1,3-Dichlorobenzene	.9998	.9976	22.78	.21	
1,4-Dichlorobenzene	1.047	1.035	22.94	1.19	
1,2-Dichlorobenzene	.9072	.8973	23.63	1.09	

* - Indicates CCC compound ** - Indicates SPCC compound

RT - Cont Cal Retention Times RF - Response Factor from daily cal @ 50.00 ug/L

\$DIFF- %Difference from average RF \$RF - Avg Response Factor from initial cal

@ - Indicates compound failed specified criteria

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8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E4703

Lab Sample ID: DAILY CLA(A)

Date Analyzed: 05/25/95

Time Analyzed: 19:50

	IS1(BCM)		IS2(DFB)		IS3(CBZ)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	50126	9.921	201245	12.491	174722	18.471
UPPER LIMIT	100252		402490		349444	
LOWER LIMIT	25063		100622		87361	
LAB SAMPLE #						
10PPB STD	47468	9.921	187304	12.491	159682	18.461
20PPB STD	46936	9.921	185958	12.491	164331	18.461
DAILY CLA(A)	50126	9.921	201245	12.491	174722	18.471
100PPB STD	51915	9.921	207481	12.491	176027	18.471
200PPB STD	49126	9.921	199061	12.491	169170	18.471

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal
from previous daily cal.

LOWER LIMIT = -50% of internal standard area of daily cal
from previous daily cal.

Column used to flag internal standard are values with an asterisk

000071

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E4708

Lab Sample ID: DAILY CAL(S)

Date Analyzed: 05/25/95

Time Analyzed: 22:19

	IS1(BCM)		IS2(DFB)		IS3(CBZ)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	64275	9.901	222468	12.491	195592	18.471
UPPER LIMIT	128550		444936		391184	
LOWER LIMIT	32138		111234		97796	
LAB SAMPLE #						
10PPB STD	62276	9.901	215028	12.491	193996	18.461
20PPB STD	61312	9.921	211135	12.491	184985	18.471
DAILY CAL	64275	9.901	222468	12.491	195592	18.471
100PPB STD	66505	9.921	233081	12.491	202700	18.471
200PPB STD	63608	9.921	215097	12.491	185792	18.471

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal
from previous daily cal.

LOWER LIMIT = -50% of internal standard area of daily cal
from previous daily cal.

Column used to flag internal standard are values with an asterisk

000072

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E4819

Lab Sample ID: DAILY CAL(S)

Date Analyzed: 06/06/95 06/07/95

Time Analyzed: 16:53

SA 06/21/95

	IS1(BCM)		IS2(DFB)		IS3(CBZ)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	42187	9.90	151266	12.47	135622	18.47
UPPER LIMIT	84374		302532		271244	
LOWER LIMIT	21094		75633		67811	
LAB SAMPLE #						
DAILY CAL(S)	40223	9.91	143654	12.50	130503	18.47
DAILY BLK(S)	45546	9.91	158509	12.49	148957	18.46
AA30904	40460	9.93	143296	12.50	127171	18.45
AA30886	30374	9.92	83011	12.49	51846	18.47
AA30897	35487	9.92	124216	12.50	111896	18.47
AA30898	34577	9.92	119727	12.49	108959	18.47
AA30905	30201	9.93	97568	12.50	81170	18.47
AA30906	31375	9.93	103781	12.50	86042	18.48
AA30907	33401	9.93	112681	12.50	94431	18.47
AA30908	30795	9.93	102718	12.50	84198	18.48
AA30870MS	38485	9.92	142326	12.50	134479	18.47
AA30870MSD	38280	9.91	139767	12.48	134262	18.46
SMB-SPK	37194	9.91	134137	12.50	129062	18.48

IS1 (BCM) = Bromochlormethane @ 50ppb
 IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
 IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal
 from previous daily cal.

LOWER LIMIT = -50% of internal standard area of daily cal
 from previous daily cal.

Column used to flag internal standard are values with an asterisk

000073

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E4851

Lab Sample ID: DAILY CAL(S)

Date Analyzed: ~~06/08/95~~ 06/12/95

Time Analyzed: 16:43

SA 06/21/95

	IS1(BCM)		IS2(DFB)		IS3(CBZ)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	42180	9.90	149026	12.50	135248	18.47
UPPER LIMIT	84360		298052		270496	
LOWER LIMIT	21090		74513		67624	
LAB SAMPLE #						
DAILY CAL(S)	39742	9.90	142740	12.50	127238	18.47
DAILY BLK(S)	40898	9.92	151167	12.50	137993	18.47
AA31052	0	0.00	0	0.00	0	0.00
AA31047	35022	9.94	122058	12.51	95622	18.46
AA30957	33458	9.93	120102	12.50	103989	18.45
AA30958	32151	9.93	106940	12.50	72582	18.47
AA30960	27625	9.93	96980	12.50	82015	18.47
AA31052	29535	9.92	102917	12.49	86652	18.46
AA30950	31978	9.92	111685	12.52	90265	18.48
AA30951	29913	9.92	107446	12.49	64314	18.47
AA30956	27511	9.92	94100	12.49	35728	18.46

IS1 (BCM) = Bromochlormethane @ 50ppb
 IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
 IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal
 from previous daily cal.

LOWER LIMIT = -50% of internal standard area of daily cal
 from previous daily cal.

Column used to flag internal standard are values with an asterisk

000074

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E4898

Lab Sample ID: DAILY CAL(A)

Date Analyzed: ~~06/13/95~~ 06/14/95

Time Analyzed: 13:50

SA 06/21/95

	IS1(BCM)		IS2(DFB)		IS3(CBZ)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	37244	9.92	159811	12.49	139962	18.47
UPPER LIMIT	74498		319622		279924	
LOWER LIMIT	18622		79905		69981	
LAB SAMPLE #						
DAILY CAL(39323	9.91	166922	12.48	147237	18.46
DAILY BLK(39377	9.93	173878	12.50	154714	18.47
AA30970	40039	9.91	169212	12.49	153731	18.46
DAILY BLK(37674	9.94	163355	12.52	143034	18.46
AA30939	36126	9.92	155019	12.49	144057	18.47
AA31049	38898	9.93	167039	12.50	150075	18.47

IS1 (BCM) = Bromochlormethane @ 50ppb
 IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
 IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal
 from previous daily cal.

LOWER LIMIT = -50% of internal standard area of daily cal
 from previous daily cal.

* Column used to flag internal standard are values with an asterisk

000075

METHOD DETECTION LIMITS FOR METHOD 8240

RUN 01/20/95

RUN AT 10PPB

FILE ----->|^E3502|^E3503|^E3504|^E3505|^E3506|^E3507|^E3508| AUG 1STDDEV1 MDL |

Chloromethane	6.151	6.141	6.181	5.211	5.181	5.461	4.961	5.611	.531	1.671
Bromomethane	16.241	16.371	16.511	14.731	16.041	16.481	14.901	15.891	.761	2.381
Vinyl Chloride	7.411	7.411	7.571	6.201	6.811	6.761	6.091	6.891	.601	1.881
Chloroethane	11.931	12.491	12.201	10.721	11.691	11.461	10.961	11.641	.641	2.011
Trichlorofluoromethyl	10.711	10.791	10.871	10.091	10.121	11.071	10.601	10.611	.371	1.181
t-Butyl Alcohol	53.711	40.301	48.651	46.621	46.341	32.201	41.751	44.221	6.901	21.701
Methyl-t-butyl ethyl	11.371	10.531	11.171	10.871	10.711	10.311	10.571	10.791	.371	1.181
Methylene Chloride	15.781	14.011	14.201	14.171	13.931	13.191	13.631	14.131	.811	2.541
Acetone	21.651	18.191	25.591	13.451	12.471	10.631	10.631	16.091	5.851	18.381
Carbon Disulfide	8.481	8.481	8.691	7.691	8.001	8.411	7.811	8.221	.381	1.201
Di-isopropyl-ether	9.491	9.431	9.621	9.411	9.461	9.431	9.321	9.451	.091	.291
1,1-Dichloroethene	9.841	9.681	10.211	9.151	9.851	10.331	9.641	9.821	.391	1.231
1,1-Dichloroethane	9.591	9.691	9.991	9.571	9.591	10.031	9.791	9.751	.201	.611
Trans-1,2-Dichloroel	9.711	9.591	9.511	9.201	9.521	9.991	9.611	9.591	.241	.751
Chloroform	10.141	10.171	10.371	10.051	10.241	10.611	10.361	10.281	.191	.591
1,2-Dichloroethane	10.571	11.021	11.191	10.831	10.851	10.861	10.551	10.841	.231	.711
2-Butanone	10.161	9.581	10.851	9.471	9.881	8.511	8.681	9.591	.821	2.571
1,1,1-Trichloroethyl	10.101	10.151	10.391	9.981	9.971	10.491	10.141	10.171	.201	.621
Carbon Tetrachlorid	9.661	9.671	9.811	9.511	9.391	9.951	9.801	9.681	.191	.601
Vinyl Acetate	9.141	8.851	8.951	8.841	8.841	8.121	8.281	8.721	.371	1.171
Bromodichloromethan	9.871	10.091	10.291	9.871	9.871	10.061	9.871	9.991	.161	.521
1,2-Dichloropropan	10.301	10.071	10.221	10.131	10.081	9.931	10.351	10.161	.151	.461
cis-1,3-Dichloroprop	9.991	9.891	10.031	9.691	9.911	9.751	9.811	9.871	.121	.381
Trichloroethene	10.201	10.101	10.401	10.071	10.231	10.341	10.361	10.241	.131	.411
Dibromochloromethan	10.021	9.901	10.351	9.891	9.831	9.391	9.871	9.891	.281	.891
1,1,2-Trichloroethyl	11.291	11.021	11.241	10.991	11.021	10.651	10.691	10.991	.241	.771
Benzene	10.181	9.801	10.021	9.941	9.921	10.031	10.241	10.021	.151	.471
Trans-1,3-Dichlorop	10.191	9.781	9.961	9.861	9.941	9.511	9.661	9.851	.221	.691
2-Chloroethylvinyle	10.251	9.841	10.281	9.761	9.841	9.101	9.741	9.831	.391	1.241
Bromoform	9.691	9.321	9.821	9.461	9.511	8.831	9.171	9.401	.331	1.041
2-Hexanone	11.131	10.151	11.381	11.011	10.631	10.561	10.471	10.761	.431	1.341
4-Methyl-2-Pentanon	12.381	9.651	10.761	10.831	10.091	9.521	9.431	10.381	1.051	3.291
Tetrachloroethene	9.751	9.821	10.091	9.841	9.821	10.061	9.901	9.901	.131	.411
1,1,2,2-Tetrachlorol	11.051	11.121	12.011	12.461	12.471	10.171	11.651	11.561	.841	2.641
Toluene	9.931	10.031	10.251	10.451	10.251	10.231	10.321	10.211	.181	.551
Chlorobenzene	10.011	10.111	10.281	10.111	9.981	10.281	10.191	10.141	.121	.381
Ethylbenzene	9.991	10.151	10.371	10.281	10.201	10.271	10.381	10.231	.131	.421
Styrene	10.461	10.391	10.411	10.341	10.501	10.451	10.631	10.451	.101	.301
m&p-Xylenes	20.611	20.591	20.971	20.951	20.701	21.161	21.151	20.881	.241	.761
o-Xylene	10.581	10.391	10.711	10.691	10.701	10.751	10.871	10.671	.151	.481
1,3-Dichlorobenzene	10.011	9.911	9.951	10.041	10.141	9.631	9.811	9.931	.171	.531
1,4-Dichlorobenzene	9.921	9.991	9.931	10.001	10.201	9.601	10.021	9.951	.181	.571
1,2-Dichlorobenzene	9.881	9.961	9.981	9.891	10.121	9.571	9.781	9.881	.171	.551

00007

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech
Lab Codex: 14622

Blank Matrix: Soil
Units: mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	379s	ND

000077

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

Lab Name: Veritech

Sample Matrix: Soil

AA31012 MS

Lab Code: 14622

% Solids for Sample: 84 *

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Comments:

FORM V (PART 1) - IN

ILM02.0

000073

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

Lab Name: Veritech

Sample Matrix: Soil

AA31012 MSD

Lab Code: 14622

% Solids for Sample: 84

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Comments:

FORM V (PART 1) - IN

ILM02.0

000079

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

AA31012 DUP

Lab Name: Veritech

Sample Matrix: SOIL

Lab Code: 14622

% Solids for Sample: 84

Concentration Units (mg/L or mg/kg dry weight): mg/kg

FORM VI - IN

ILM02.0

000080

analysis TPH SOILS
 BATCH 379
 DATE: 15-Jun-95
 ANALYST: JK

Q.C. DATA

THEORETICAL

	VALUE	RESULT	% REC.
	PPM	PPM	
CK STD	10	9.49	95%
MBS	666.7	650.27	98%
MS #1	793.65	750.5	88%
MS #2	793.65	775.71	92%
SAMPLE		49.24	RPD
SAMPLE DUP		41.36	17.40%

SAMPLE #	SOLIDS FACTOR	SAMPLE MG WEIGHT	CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MOL DRY WT.
10mg 6-09	1.00	1000.0	9.4911	1.0	9.49	
MBS	1.00	15.0	9.7541	1.0	650.27	20.00
DUP 31012	0.84	15.0	0.5212	1.0	41.36	23.81
MS 31012	0.84	15.0	9.4563	1.0	750.50	23.81
MSD 31012	0.84	15.0	9.7739	1.0	775.71	23.81
MB 6-09	1.00	15.0	0.2085	1.0	13.90	20.00
30940	1.00	15.0	7.5954	50.0	25317.90	1000.00
30941	1.00	15.0	17.4784	5.0	5826.13	100.00
30942	0.96	15.0	12.2652	5.0	4258.74	104.17
30943	1.00	15.0	9.5209	10.0	6347.24	200.00
30944	0.95	15.0	9.9973	10.0	7015.63	210.53
30945	0.92	15.0	12.7788	10.0	9260.00	217.39
31012	0.84	15.0	0.6204	1.0	49.24	23.81
31013	0.85	15.0	1.2656	1.0	99.26	23.53
31014	0.86	15.0	2.0646	1.0	160.04	23.26
31044	0.84	15.0	0.4443	1.0	35.26	23.81
31045	0.75	15.0	0.3276	1.0	29.12	26.67
31046	0.79	15.0	0.2358	1.0	19.90	25.32
31047	0.89	15.0	6.9875	10.0	5234.05	224.72
31048	0.79	15.0	0.2805	1.0	23.67	25.32
MB 6-10	1.00	15.0	0.2334	1.0	15.56	20.00
10mg 6-10	1.00	1000.0	9.8062	1.0	9.81	20.00
31039	0.90	15.0	1.2705	1.0	94.11	22.22
31040	0.86	15.0	6.5855	1.0	510.50	23.26
31041	0.88	15.0	0.9107	1.0	69.00	22.73
31042	0.92	15.0	0.9852	1.0	71.39	21.74
31043	0.89	15.0	5.2257	1.0	391.44	22.47
MB 6-13	1.00	15.0	0.1738	1.0	11.59	20.00
10mg 6-13	1.00	1000.0	9.5060	1.0	9.51	20.00
31091	0.81	15.0	14.4115	10!	11861.31	246.91

✓ DATA INPUT
 6/15/95 SK

SK
 6/15/95
 SK

000081

TPH LINEAR REGRESSION
TPH_1S

DATE 5-11-95
ANALYST JS

STDs (MG) ABS.

0	0.0000
2.5	0.1122
5	0.2058
10	0.4037
15	0.5974
20	0.8177

Regression Output:

Constant	0.003495
Std Err of Y Est	0.008116
R Squared	0.999453
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.040301
Std Err of Coef.	0.000471

Lot # W-95-TPH-1522

STDs (MG) ABS. PPM DIFF

0	0.0000	-0.0867	0.0867
2.5	0.1120	2.6923	-0.1923
5	0.2058	5.0198	-0.0198
10	0.4037	9.9303	0.0697
15	0.5974	14.7365	0.2635
20	0.8177	20.2028	-0.2028

BATCH 379

SAMPLE	ABS.	MG
10mg 6-09	0.3860 ✓	9.4911
MBS	0.3966 ✓	9.7541
DUP 31012	0.0245 ✓	0.5212
MS 31012	0.3846 ✓	9.4563
MSD 31012	0.3974 ✓	9.7739
MB 6-09	0.0119 ✓	0.2085
30940	0.3096 ✓	7.5954
30941	0.7079 ✓	17.4784
30942	0.4978 ✓	12.2652
30943	0.3872 ✓	9.5209
30944	0.4064 ✓	9.9973
30945	0.5185 ✓	12.7788
31012	0.0285 ✓	0.6204
31013	0.0545 ✓	1.2656
31014	0.0867 ✓	2.0646
31044	0.0214 ✓	0.4443
31045	0.0167 ✓	0.3276
31046	0.0130 ✓	0.2358
31047	0.2851 ✓	6.9875
31048	0.0148 ✓	0.2805
MB 6-10	0.0129 ✓	0.2334
10mg 6-10	0.3987 ✓	9.8062
31039	0.0547 ✓	1.2705
31040	0.2689 ✓	6.5855
31041	0.0402 ✓	0.9107
31042	0.0432 ✓	0.9852
31043	0.2141 ✓	5.2257
MB 6-13	0.0105 ✓	0.1738

JK
6/11/95

000082

10mg 6-13
31091

0.3866 ✓
0.5843 ✓

9.5060
14.4115

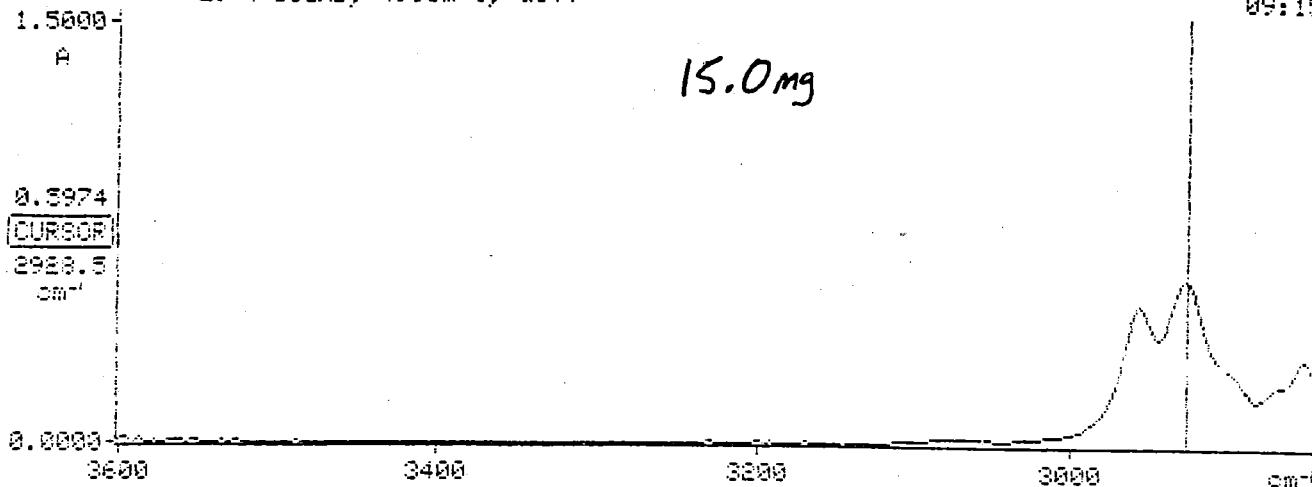
JK
6/14/95

000083

TPH CURVE
5/11/95 JS

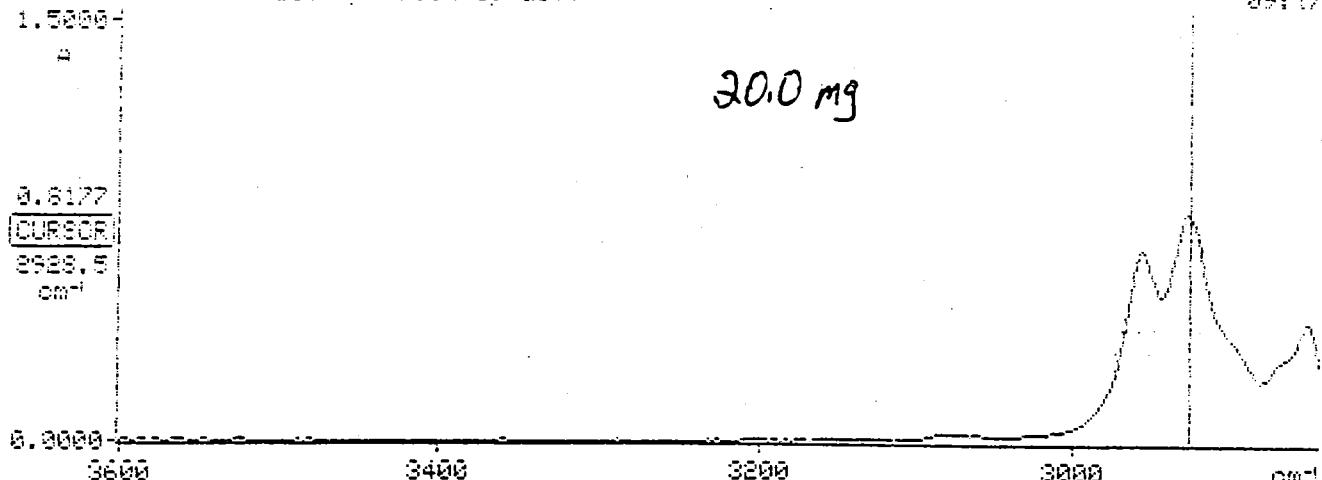
DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff

09:15

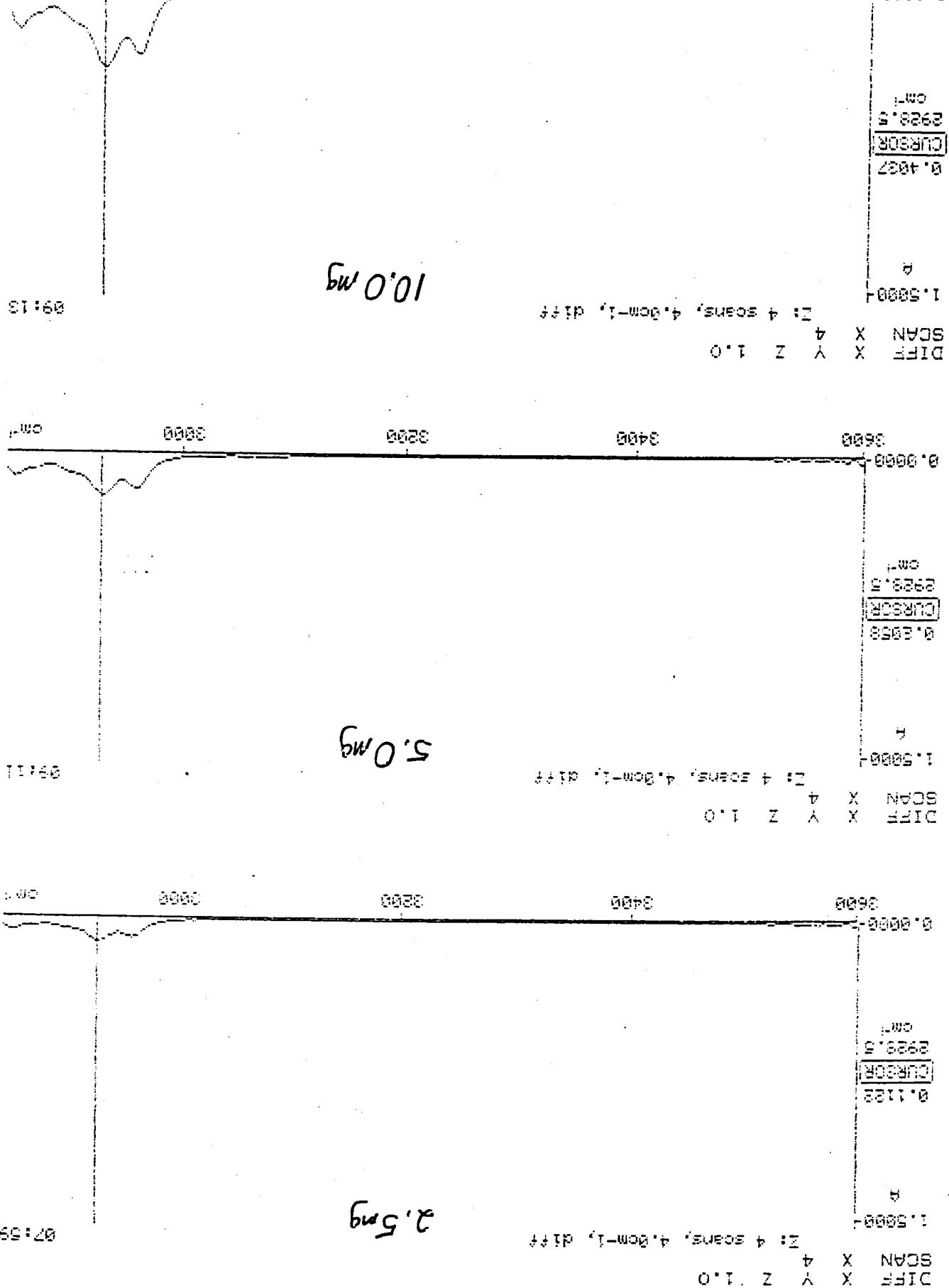


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff

09:17



000084



1 PH CURE IS 5/11/95 IS

DIFF SCAN X Y Z 1.0

Z: 4 scans, 4.0cm⁻¹, diff

1.5000

R

0.3860

CURSOR

2938.5

cm⁻¹

0.3860

3838

3468

3298

3028

cm⁻¹

Ex/Run
JK
5/19/95

#379
long

14:35

000086

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.50004
A

0.8119
CURSOR
2928.5
cm⁻¹

0.0000
3600 3400 3200 3000 cm⁻¹

#399

14:48

MB

Ex/Run
JIC
6/9/95

000087

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.50004

A

0.0966
[CURSOR]
2988.5
cm⁻¹

0.00004
3600 3400 3200 3000 cm⁻¹

Ex/Run
JK
6/9/95

#379
MBS

17:21

000088

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff
1.5000

a

0.0285

CURSOR

2928.5

cm⁻¹

0.0000

3600

3400

3200

3000

cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff
1.5000

a

0.0245

CURSOR

2928.5

cm⁻¹

0.0000

3600

3400

3200

3000

cm⁻¹

Ex/RuH

619/95

JK

#379
3/12

18:15

18:16

#379
SD
3/12

Ex/RuH

JK

3/19/95

000089

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.5000

A

17:14

#319
MSD
31012

0.3846
CURSOR
2928.5
cm⁻¹

0.0000
3600 3400 3200 3000 2800 cm⁻¹

Ex/Run
JK
619195

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.5000

A

17:17

#319
MSD
31012

0.3974
CURSOR
2928.5
cm⁻¹

0.0000
3600 3400 3200 3000 2800 cm⁻¹

Ex/Run
JK
619195

000090

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.5000

A

0.0214

CURSOR

2928.5

cm⁻¹

0.0000

3600

3400

3200

3000

cm⁻¹

Ex/Run

JK

6/9/95

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.5000

A

0.0167

CURSOR

2928.5

cm⁻¹

0.0000

3600

3400

3200

3000

cm⁻¹

Ex/Run

JK

6/9/95

#369

3/04/95

14:56

#369

3/04/95

15:01

000001

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff

1.5000
A

15:08

#379
31046

0.0130
[CURSOR]
2929.5
cm⁻¹

Ex/Run
JK
6/9/95

0.0000
3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm⁻¹, diff

1.5000
A

15:08

#379
31047

0.0051
[CURSOR]
2929.5
cm⁻¹

Ex/Run
JK
6/9/95

0.0000
3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm⁻¹, diff

1.5000
A

15:09

#379
31048

0.0148
[CURSOR]
2929.5
cm⁻¹

Ex/Run
JK
6/9/95

0.0000
3600 3400 3200 3000 cm⁻¹

000092